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ABSTRACT

These technical papers examine alternative approaches to the evaluation of inservice and preservice training programs for Teacher Corps interns. The first paper explores the theoretical and practical consequences in conceptualizing teacher education as a socialization process. In the second, the suggestion is made that to understand the socializing impact of a teacher training event, it may be necessary to have as full a description of that event as possible, and offers ways in which this may be obtained. An argument is made in the third paper that current standard evaluation methods are not appropriate for illuminating many features of an event in teacher education. The final paper explores the problems experienced by contractual evaluators of teacher education programs, raising the ethical and political questions with which they are faced. (JD)

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Report of CMTI IMPACT STUDY TEAM

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Director

EVALUATING

TEACHER EDUCATION

1975 CMTI Impact Study

Technical Reports

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Madison, Wisconsin

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ABSTRACT

The technical reports in this volume are papers written for a symposium held at the April, 1976 AERA convention. The title of the symposium was, "The analysis of teacher education programs as dynamic events." The purpose of these papers is to suggest an alternative approach to the evaluation of in-service and pre-service teacher training events. The papers are exploratory and should be considered not as conclusions but as a forum for discussing problems in the evaluation of events in teacher education.

Technical Report Number Eighteen, Teacher Education as a Process of Socialization, explores the theoretical and practical consequences in conceptualizing teacher education as a socialization process. Examples from literature in the social sciences are used as well as illustrations from the 1975 CMTI Impact Study.

Technical Report Number Nineteen, Describing Dynamic Events Within Teacher Education, suggests that to understand the socializing impact of a teacher training event, it may be necessary to have as full a description of that event as possible. The report discusses various possibilities for capturing event descriptions, using some examples from the 1975 CMTI Impact Study.

Technical Report Number Twenty, Problems in Analyzing Dynamic Events Within Teacher Education, argues that current standard evaluation methodologies are not appropriate for illuminating many features of an event in teacher education. In addition to pointing out the inadequacy of standard analytic techniques, the report suggests that there are alternative analytic techniques that are much more appropriate. Examples are used from the 1975 CMTI Impact Study.

Technical Report Number Twenty-One, The Ethics and Politics of Evaluation: Clients, Patrons and Casualties, explores the problems to contractual evaluators of teacher education programs. The report suggests that evaluators must confront issues that arise from certain interests and responsibilities of those funding the evaluation, those being evaluated and those doing the evaluation. It further argues that these issues require that ethical and political positions be taken by evaluators as well as an objective scientific position.

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PUBLICATIONS OF 1975 CMTI IMPACT STUDY

Technical Reports

Descriptions and Interpretations

TR 1 Description of CMTI
TR 2 Interpretations of CMTI
TR 3 Poem
TR 4 Using Photographs for Interpretation
TR 5 Description of Internship

Methodology

TR 6 CMTI Impact Study Design and Survey Data Analysis
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Recommendations

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Evaluating Teacher Education

TR 18 Teacher Education as a Process of Socialization
TR 19 Describing Dynamic Events Within Teacher Education
TR 20 Problems in Analyzing Dynamic Events Within Teacher Education
TR 21 The Ethics and Politics of Evaluation: Clients, Patrons and Casualties

Interim Reports

Impact of CMTI: Description and Preliminary Analysis (October, 1975)

Together: A Photographic Essay (October, 1975)

Final Report

Challenges to Teacher Educators: Lessons Learned From the 1975 Teacher Corps Corps Member Training Institute (to be completed September, 1976)

PREFACE

What Is Teacher Corps?

Teacher Corps is a federal program funded since 1965 to improve the schooling environment of children from low-income communities through improved professional development applied by local projects. Starting in June 1975, an original Teacher Corps emphasis on pre-service teacher education was changed rather dramatically by Congress to include single school focus and training of experienced teachers. In operational terms this meant that each Teacher Corps project would have four pre-service candidates (called "interns") instead of the previous thirty-five.

The added focus on retraining experienced teachers led Teacher Corps to anticipate some consequences for the pre-service interns. Some of the anticipated consequences were that interns would have less attention, less status, less interaction among themselves and less cultural representation within each project than had previously been true. One response to these anticipated consequences was to plan a new Teacher Corps undertaking: The 1975 Corps Member Training Institute.

What Was the 1975 Corps Member Training Institute?

The 1975 Corps Member Training Institute (CMTI) was to be a one month training session for approximately two hundred and twenty-five interns from fifty-four different Teacher Corps projects throughout the United States and Micronesia. The four major purposes of the CMTI were:

1) to provide a rich multi-cultural interactive experience for the interns
2) to develop an esprit de corps among interns
3) to provide an academic background for interns to develop perspectives towards organizations and organizational theory, and
4) to introduce the interns to specific models of teaching and learning

The first two purposes responded to the concerns already expressed about the new role of interns in Teacher Corps projects. The latter two purposes reflected the findings and recommendations of recent evaluation studies on Teacher Corps (e.g., the Abt Study, 1972, the Corwin Study, 1974, the Marsh Study, 1975). Each of these studies suggested that Teacher Corps interns could benefit from an awareness of the organizational realities in which schooling is formed. The innovative feature of including organizational theory within teacher training should not be missed when considering the purposes of the 1975 Corps Member Training Institute.

Since the CMTI was both a new undertaking for Teacher Corps and also reflected an innovative feature to teacher education, the CMTI Impact Study was created as part of the instructional contract.

What Was the 1975 CMTI Impact Study?

The responsibilities given to me as the director of the 1975 CMTI Impact Study were to demonstrate the nature of the CMTI as a professional training event and to determine the impact of this event upon the participants. The findings of the CMTI Impact Study were expected to be useful for Teacher

Corps policy decisions about the replication of future CMTI's and also be interesting and informative to all teacher educators interested in changing current practices in teacher education.

One of my first responses to these responsibilities was to involve a multi-disciplinary team of teacher educators. This team included Dr. Thomas Romberg, a professor of mathematics education with special experience in research methodology, Dr. B. Robert Tabachnick, a professor of elementary social studies with special experience in education in developing countries, Dr. Gary Wehlage, a professor of secondary social studies with special experience in analyzing social issues, Dr. Thomas Popkewitz, a professor of elementary social studies with special experience in social science research techniques, and Dr. Carl Grant, a professor of clinical teacher education with special experience in multi-cultural education. These five members and myself became the principal investigators of the 1975 CMTI Impact Study Team. It was a team that met often, shared reports and perceptions, argued, made decisions together and participated in the description, interpretation and analyses and the writing of the study's reports.

There were certain decisions made by the 1975 CMTI Impact Study Team that may help clarify the way in which we interpreted our responsibilities. First, we considered the CMTI to be a one month event within an intern's two year teacher education program. This meant that to answer the basic question, "What kind of effect did the CMTI have upon the interns?", we needed to look beyond the time boundaries of CMTI to determine its impact.

Second, the study team decided to look at teacher education as a socialization process. This meant that determining impact was interpreted in a wider context than the stated instructional objectives of CMTI. The content chosen was the impact of CMTI upon the interns' development of professional perspectives towards teaching.

Third, the study team chose to determine impact by combining both quantitative and qualitative data. This meant that survey instruments were designed and observations and interviews conducted that were intended to be complementary and capable of being analyzed and interpreted together.

Fourth, the team chose to perform most of the observing and interviewing themselves.

Fifth, the team chose a time-series design and a time-series data analytic procedure for analyzing the survey data. This meant administering surveys a number of times both during and after CMTI.

Sixth, it was decided that interpretations and conclusion of impact must include a synthesis of quantitative and qualitative data. This meant that the relationship between quantitative and qualitative data was not considered to be one of simple effect and cause or of dependent and independent variables. Instead observational descriptions, participant interview responses, survey results, and instructional intentions and instructor's underlying assumptions were to be considered together when interpreting the impact of the CMTI.

Seventh, the team decided to use photography in evaluation, not only as a record keeping tool but also in an interpretive and analytic role.

Generally, then, the team approached the problem of determining the impact

of the 1975 Teacher Corps Corps Member Training Institute as a real challenge to capture, interpret and illuminate the effects of an anticipated dynamic event within the professional life of the participants.

What Are the Reports of the 1975 CMTI Impact Study Team?

Another decision made by the 1975 CMTI Impact Study Team was to share its descriptions, analyses, interpretations and methodology with a variety of audiences. These audiences included Teacher Corps, Washington staff, CMTI participants, Teacher Corps project personnel and the teacher education profession at large.

In accordance with this decision, the 1975 CMTI Impact Study Team has published two interim reports, twenty-one technical reports and a final report.

The two interim reports were published in September and October of 1975. The first interim report was a photographic essay, titled Together, the second was titled Impact of CMTI: Description and Preliminary Analysis. These interim reports were shared with Teacher Corps personnel and participants.

The twenty-one technical reports were published in September 1976. These technical reports were published in five volumes: Descriptions and Interpretations, Methodology, Survey Results, Recommendations and Evaluating Teacher Education. A list of the technical reports included in each of these volumes is on page v. This is one of those volumes. These technical reports have been written for Teacher Corps personnel for their further understanding of CMTI and for certain Teacher Corps policy decisions. They have also been

written for other educators interested in the details of the 1975 CMTI, its impact or the methodology used for the Impact Study.

The final report is to be published in the Fall of 1976. Its title (tentative at this time) is Challenges to Teacher Educators: Lessons Learned from the 1975 Teacher Corps Corps Member Training Institute. This final report is a synthesis of the findings of the 1975 CMTI Impact Study. It has been written for all teacher educators and addresses issues raised from the 1975 CMTI Impact Study about field-based teacher education.

Acknowledgments

As director of the 1975 CMTI Impact Study Team, I would like to acknowledge the support of certain people who have been instrumental to our efforts. First, it was our good fortune to work with Dr. William L. Smith, Director of Teacher Corps. Bill Smith continually encouraged us and challenged us to be as provocative and persistent as possible in describing and analyzing, interpreting and communicating the results of our study. I would also like to express our appreciation of Dr. James Steffensen, Chief of Program Development, Teacher Corps. Jim Steffensen's administrative abilities and humane approach have been felt by us all. The importance to our study of the cooperation of all Tenth Cycle Teacher Corps interns cannot be overemphasized. Not only the surveys but many of the descriptions and interpretations are theirs or depended upon their open expression of thoughtful responses. The cooperation of the project directors of Tenth Cycle Teacher Corps projects should also be recognized since without their help and openness to our requests, we would have had no follow-up study of CMTI.

In addition to the principal investigators of the study team, there were others who have contributed to participation in this study. Special recognition must be given to the observers at CMTI: Robert Crumpton, Reggie Jones, Craig Nauman, Iliana Ortiz and our photographer, Jeanne Tabachnick. The rich data originally collected by these people to describe CMTI formed the real excitement and impetus for our entire study. Two individuals became part of the study team during the final stages of the study. Dr. Leo Anglin of Kent State University was especially important to our efforts in applying and reporting time-series analysis to the collected survey data. Calvin Stone was important to our efforts in further analyzing, interpreting and reporting the observational and interview data.

Finally, I want to express our appreciation to a person who started out as the secretary to the study but soon became, in function at least, my administrative assistant. Linda Lee Weiler has not only helped orchestrate the many drafts of these reports, but has also taken much of the responsibility for such matters as budget, travel, contact with the fifty-four projects and over two hundred interns and keeping us prima donnas of the study team in line. Those who know me know that I could not have done these things myself.

Tom Fox

September 1976

Teacher Education as a Process of Socialization

Technical Report Number 18
1975 CMTI Impact Study
sponsored by Teacher Corps
William L. Smith, Director

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TEACHER EDUCATION AS A PROCESS OF SOCIALIZATION: THE SOCIAL DISTRIBUTION OF KNOWLEDGE

I. INTRODUCTION

The purpose of this paper is to provide a perspective for understanding the phenomena of teacher education. The essay grows out of a dissatisfaction with current beliefs about the form and content of teacher preparation. At a symbolic level, there seems to be a great ferment in teacher education: journals are published, federal agencies created and books written about the crisis in teacher education. The activity though, produces a series of contrasts and contradictions. We propose more intensive practical experiences while at the same time lamenting the fact that these very schools fail large segments of our children. People talk about seemingly heroic acts of precision-teaching and competency-based education while not coming to grips with the fact that many of these activities tend to keep things the way they are. A uniquely modern notion of humanism arises in education to deal with the impersonalization and alienation of an industrial culture. Yet while wanting to make emotional dimensions an integral part of education, humanism becomes anti-intellectual. The social, political and ethical responsibilities of teacher education are hidden by technical definitions of educational problems and procedural responses to reform (for discussion of this, see Popkewitz, 1975).

The notion of socialization orients this discussion in exploring the assumptions and consequences of the ways in which we prepare teachers. It is clear to this writer that people construct webs of meaning during teacher education which allow them to take part as a "teacher" in the ordinary events and encounters of schooling. The newly initiated teachers in Portland, OR and Columbus, GA do talk and act in a manner similar to those in school.

Implicit in their actions are habits of thinking and legitimations which justify and make reasonable the tasks of teaching. The problem of understanding teacher socialization is to illuminate the ethical consequences of teacher education programs on the systems of thoughts and actions students develop.*

II. SOCIALIZATION AND INDIVIDUAL RESPONSIBILITY

The notion of socialization has a long and productive history in the study of education. In 1932, Waller wrote about the social influences and occupational characteristics surrounding teaching. Among other interests, Waller gave attention to teaching as a form of institutional leadership which involved patterns of dominance and subordination. He discussed how school authority was socially formalized and the social traits of people who worked as teachers. His analysis of factors influencing classroom interaction are still of interest to students of education. More recently, Dan Lortie (1975) considered social factors which give teaching a peculiar form and content. His research gives attention to certain structural and psychological qualities which influence the type of commitment people have towards teaching.

Typically, socialization research has focused upon how people learn to accept or are processed into an occupation. Brim and Wheeler (1966), for example, define socialization as "the process by which persons acquire the knowledge, skills and dispositions that make them more or less able members of a society" (p. 1). The function of socialization, the continue, "is to

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*Because of a lack of an unencumbered noun to refer to a teaching student, I will use the word student when referring to someone in the process of becoming a teacher. To avoid confusion, pupil will be used as a synonym for children in school.

transform the human raw material of society into good working members." Socialization research, in turn, concerns how people come to accept their assigned roles in society: 1) how an individual acquires understandings of the recognized statuses in society; that is, learns the names so as to locate oneself and others in the social structures; and 2) how individuals learn role prescriptions and role behavior and its consistent attitudes and emotions (Wheeler and Brim, pp. 1-5, also see Edgar and Warren, 1967, and Parsons, 1959). Much of the political socialization research popular during the 1960's maintained similar orientations. Its basic question was how the young came to accept the norms and legitimacy symbols of the existing political system.

We reject this view of socialization for two fundamental reasons. First, the notion of socialization tends to be oversocialized. Individuals are defined as being overpowered by forces outside of them. Individual responsibility, from this perspective, is to acquiesce and conform to existing social arrangements. Occupational research such as in teacher education becomes a search for factors that produce consensus or dissonance to the prevailing social structures. Lortie's (1975) discussion of teacher socialization, for example, focuses upon the work structures which permit or limit people's affiliation to the profession of teaching. Horowitz (1968) studies the different expectations students have about teaching from those held by their classroom teachers. The researcher is concerned that dissimilarities and inaccuracies in the perception of the role of teacher will adversely affect the acculturation process of students into teaching. A tacit orientation of such research is to develop more powerful positive socializing mechanisms.

Never seriously questioned is whether the arrangements of teacher education or teaching are themselves warranted. Researchers seem to take rather than

make educators categories and administrative organization as the assumptions of their research (see M. Young, 1971, for discussion of this). Further, while social structures are compelling in the construction of identity, the concept of socialization should define people as both recipients and creators of values. Research should concern how institutional arrangements foster and restrict people from acting imaginatively and creatively in determining the scope and possibilities of their social conditions.

Second, the notion of role is inadequately conceived. There is a tendency in research to treat roles as "things" which people accept unconditionally upon entering an institutional office. The role of teacher, pupil or soldier is viewed as a permanent, fixed object into which people are socialized. Grambs (1975), for example, is concerned with role as "the ways in which teaching determines how he will feel and act within the institutional framework of the public schools" (p. 73). The investigation focuses upon the role relationship "inherent in the situation," such as teacher as judge of achievement, person who controls knowledge and keeper of discipline. It is assumed that the label of "teacher" carries predetermined work attitudes, status, behaviors and norms which a student passively incorporates.

An undimensional view of "role" provides a distorted conception of what occurs when people enter institutional settings (see Cicourel, 1970). On one hand we can talk about teaching as having general characteristics and we can identify "teachers" upon walking into a school setting. However, these general characteristics give us only a partial story to the meaning of being a teacher. The actual definition of a role is determined by the beliefs, norms and actions of people interacting within the work settings of teaching.

Educators cannot take-for-granted the characteristics of "roles." Cusick (1973) provides a different understanding to the role of teacher by examining social interaction in a high school. He suggests that the face-to-face contacts teachers had with students tended to denude teachers of instructional authority which traditional perspectives define as "inherent in the situation" of schools. Haller (1967) found a similar negotiation and reciprocity between children and teachers in determining classroom social linguistic pattern. Teachers moved in the direction of childlike expression rather than children accepting adult speech patterns. The meaning of "being a teacher" has existential qualities which involve people negotiating their status and responsibilities in specific social contexts.

An analysis of teacher socialization involves understanding the interplay of institutional structures and individuals (for a general discussion see Berger and Luchmann, 1967. An attempt to cross-culturally apply their perspective, see Lynch and Plunkelt, 1976.) Before people enter into teaching situations, there already exist patterns of behavior, objects and social relationships. These patterns contain a knowledge about teaching which serves to guide personal activities and interpretations within the contexts of schools. The definitions individuals give to occupational activities, though, are only partially predefined by the situation. As students participate in the daily activities and events of preparation, they construct meanings about the tasks and responsibilities of teaching. Students actively appropriate conceptions of curriculum, ways of organizing instruction, expectations about the status relationships of teaching and notions of professional competence. The active relationship between people and institutions becomes evident as people choose to become committed, detached or revolt from the constraints existing within teacher education.

The importance of the institutional context of teacher education lies in the knowledge students derive from their participation. Involvement in these regularized patterns of conduct produce not only an understanding of what is known (the explicit content of teacher education) but commitments or dispositions to of how people should act. Embedded in the work and milieu of teacher education are certain rules of action, lines of reasoning and configurations of desired courses of action. For example, students preparing for teaching may learn a vocabulary which directs attention to the work of school as "learning," children's interest as "motivation," or the measure of achievement as a correct stroke of a pencil on a multiple item test. Using these school words also entails orientations and emotional commitments about what ought to be done in school. "Learning" is originally a metaphor of educational psychology. As will be discussed later, the metaphors contain assumptions and sentiments about how people in school should be understood. Using these metaphors, people accept certain definitions of educational problems, strategies for their solution and constraints on their actions. The institutional structures in which teacher education takes place, therefore, must be viewed as providing a normative as well as cognitive background of knowledge by which students can give plausibility and reasonability to the activities of school.

The background knowledge a student confronts in teacher education involves at least three elements: 1) an inferential structure to orient and direct the actions of teachers; 2) forms of educational knowledge considered as superior in dignity to other "non-educational" experiences of children; and 3) work activities from which satisfaction is to be derived. The socialization of teaching students entails learning how to deal with these dimensions as individuals create coherent systems of belief about teaching.

III. INFERENTIAL SYSTEMS OF KNOWLEDGE

In some ways, the functioning of a teacher education program is analogous to scientific paradigms discussed by Thomas Kuhn (1i70). Scientific communities contain general paradigms which provide inferential structures for people participating in the field. Students entering into physics, chemistry or teaching are confronted with propr knowledge ot that discipline, projected problems of the field, criteria of truth and validity, and assumptions about how the elements of the universe should interact with each other. Through social interactions and programmatic activities, students confront the background knowledge of the field and construct a protessional identity. The tacit nature of an inferential structure makes that knowledge psychologically compelling and thus resistant to challenges. The Ptolemaic world view was maintained tor many centuries as people believed (and acted as if) that was what the universe was like. Transformation in the fundamental knowledge of a discipline occurs over time and with tension and conflict.

The inferential structure of education has somewhat of a different set of conditions than found in scientific communities. Education contains multiple paradigms. Ditferent and possibly conflicting assumptions may be found in the subject matter of teaching, educational methods course or in the field experiences of student teaching. Further, there is a disagreement within any one field of study. For example, there is a serious debate in curriculum about the nature and character of its endeavor. Humanists and Marxists are challenging the assumptions and procedures of people who define curriculum from management approaches. The development of a teaching perspective involves students integrating different patterns of ideation into a coherent system of meaning and interpretation.

The inferential structures embedded in teacher education contexts are articulated through vocabularies of motive. C. Wright Mills (1967) suggests institutional contexts contain a dominant vocabulary which forms an interpretative scheme. That is, from the interactions of people involved in teacher education emerge a functional vocabulary by which intentionality is attributed to actions. Words are assigned as jusitifications for conduct ("ability" or "disadvantaged" are reasons children succeed or fail in school). Names are given to people and events ("She is a third grader"; "they have learning disabilities"; "this is a remedial reading room").

The names learned in the discourse of teaching has consequences for social action. Words contain epistemologies and assumptions about the nature of reality which underlies the actions taken. The languages of teaching articulates ways in which people have sought to define problems of schools, to offer solutions to those problems and to suggest certain visions of what schools, ideas and children are like. Language serves to curtail the range of alternatives open to people who practice that occupation. The extent to which a teaching language is internalized to express intent is evidence of socialization.

Students coming into teaching have to deal with at least two different vocabularies of motive in educational discourse (see Esland, in Young, 1971). The dominant language can be called "positivism." The other is "dialectical." Each language maintains different epistemologies and assumptions in the construction of an occupational identity. The following discussion will highlight certain characteristics of these vocabularies and their implications

to a teaching perspective. We cannot assume to know at this point, however, what empirical configurations of knowledge actually emerge from the settings in which students learn about teaching.

The dominant educational vocabulary emerges from a philosophical position of positivism, having offshoots in scientific behaviorism, management and bureaucracy. Within this tradition, knowledge is thought of as inert things or objects which exist outsiee the minds of individuals. The "structure" of disciplines curriculum movement of the 1960's, for example, typically defined social inquiry as sets of generalizations and particular classification of prlblems, data and verification procedures which are separate from the social process in which they occur. The educational testing industry, as well, is itself built upon a dehumanized notion of knowledge.

A pedagogy within this tradition is concerned with a limited range of solutions to questions and a preoccupation with right answers. The behavioral objective phenomena, for example, is a natural response to a conception of knowledge as predetermined objects. Many current schools attempt to individualize and construct learning centers make the knowledge-as-things more palatable - the objects of knowledge are transcribed onto cards or dittos, ordered into an hierarchy and placed into a box so children can receive that knowledge at their own pace. (The rhetoric is "children learn at their own rate" and "educators are meeting individual needs.") The focus of instruction is how children can absorb and therefore replicate the knowledge chosen by experts. Success is measured by object, i.e., criteria which compares "intelligence," a given and latent quality in children, to the acquisition of certain knowledge objects. The Chicago School Teachers Becker (1952)

interviewed, for example, maintain a reified notion of child and knowledge. Teachers rejected lower class children because they do not meet the moral ideal type teachers established nor learn the knowledge objectives teachers wanted to impose. The dicotonomizing of child and knowledge dehumanizes the intersubjective processes by which individuals construct knowledge.

The positivistic tradition carries over into teacher education a distinctive cognitive style or habit of thinking. The tasks of preparing teachers is similar to that of training children. One needs to identify the objects of knowledge, create precise and rational systems to convey that knowledge and design objective tests to monitor and control progress. Systems of categories are created through system analysis of PERT charts which everything in the jurisdiction of teacher education can fit. Languages which reflect ambiguities and uncertainties are replaced by a technical language. People are "resources," communities which schools exist are "sites," things people do are "inputs" and "outputs" and classes people take are "modules." Efficiency is sought through "competencies" which predefines certain actions as critical to the tasks of teaching. Once students repeat these actions (teach three lessons to a whole class, develop an assessment test) they can move on to the next step until they complete the hierarchy of tasks. The combined use of management systems and competencies insures a predictability, anonomity and equality of treatment in teacher education. It also makes means as important ends. To the extent, student teachers accept and use positivistic languages and its rituals to orient and direct teacher behavior, socialization has occurred which limits the range of choices and actions deemed appropriate in teaching.

Much of my observations and discussions with interns involved in current Teacher Corps projects suggests that a positivistic cognitive style is maintained. Many interns seem to believe in the notion of perfectibility of the poor through the correct application of tools, techniques and books. Intern teaching tasks involve seeking the right melange of procedures. Instruction begins with classifying children according to standardized categories. Interns talk about their functional activities in relationship to definitions of children as hyperactive, low-ability, learning disabled. Instruction concerns eliminating the deviations which produce children's failure: administer assessment tests to identify specific skills and produce remediation which enables children to acquire the predefined knowledge or behaviors to lift children out of the failure syndrome.

The rationalism of the intern training so interpenetrates their actions within the projects that problems and strategies for change are argued within the premises of the existing system of belief. In one school, major aspects of interns preparation was to learn the proper sequences by which the school knowledge was defined. Interns were to use sequences to "diagnose" children's written work and design future instruction around forms of remediation. In a different instance, when substantive conflict about the purpose and direction of a project occurred among program participants, the disagreement was translated into role-conflict. A management consultant firm was hired to define the formal roles of each participant. The conflict was reinterpreted to mean a lack of procedural clarity in the project.

The acceptance of a bureaucratic style of thinking has certain implications as it is internalized into the perspectives of student teachers. First, teachers may define their tasks in such a way as to produce massive alienation. Knowledge, teacher and child are treated as separate and

distinct objects, the work of teaching is to impose upon children a predetermined world, outside of personal intervention or imagination. Second, a student comes to believe that intellectual and moral authority lie in the hands of the experts and elites who control education. Third, the reification leads to a construction of ideal-types which have a self-fulfilling function. The idea of "intelligence" for example, suggests a certain image of children which teachers are to nurture. The images maintain a form of ethnocentricity by which actions in school are to be judged. "Compensatory" education or remediation, for example, are seen as plausible actions to reduce dissonance between the teacher's projected (and culture-bound) image and the actions of specific children.

A fourth consequence of positivism to the development of teaching perspectives involves the imposition of a peculiar mode of reciprocity. A teacher and child are not engaged in common tasks. A teacher's problem is to control the child. A child's problem is to get educated. Social relationships exist to have something done to children. Berger (Kellner & Berger, 1973) suggest that positivistic styles of thinking produce a greater sense of impotence. Choices are narrowly defined for both teachers and children by what the rationality of the institution considers legitimate and those constraints spread to other fields of social action.

A challenge to positivistic thought in education comes from a position called "dialectical." Drawn from the epistemological roots of Hegel and Marx, people are viewed as existentially related to their social structures. As people participate in communities, they actively construct meanings and significance to their encounters. This tradition, however, assumes a peculiar meaning in educational thought. "Problem-solving" orientations replace the learning of concrete objects as a purpose of teaching. The hierarchy and

separation of subject-matter are no longer of major importance. The pedagogy of teaching concerns a child as both an active and passive agent. The knowledge he/she develops occurs from interacting with the social environments of school and from the interplay between the knowledge of a child and that of a teacher. The dialectic tradition in education is articulated in the writings of Dewey, the designs of progressive schools and the current open-education movement.

The intentional scheme of a dialectic assumes certain characteristics in a teaching perspective. The notion of community and a problem-solving orientation replaces attempts to make teaching predictable, and instruction, fragmentation and orderly. A collegiate rather than hierarchical arrangement is sought between professor and students. Each member is considered as capable of making valid and significant contributions to an understanding of the school world. Assessment of classroom work focuses upon the interrelation of classroom environment and children's activities. Categories such as classroom environments, decision-making, responsibility or initiative replace more precise and typically anonymous criteria of success such as reading scores. Teachers learn how to use space flexibility to respond to ongoing and shared responsibility of classroom life. Emphasis on change disposes teachers to consider unpredictable rather than the certain as justified. Emotion and attitudes towards class work also becomes valued as part of educational processes. The design of teacher education would probably reflect these different belief structures.

A possible consequence of the dialectic tradition in school is a more powerful people-shaping ideology in that private thoughts become open to public scrutiny and hence controllable. The reliance on the emotional and personal dimensions may have interns ignore the substantive political and ethical issues of teaching.

IV. SACRED AND PROFANE KNOWLEDGE

The job of teaching contains sacred and profane knowledge. The distinction is used by Durkheim (1965) to differentiate certain elements of religious thought from the everyday belief systems. Religious belief systems, Durkeim argues, contain a knowledge which is considered naturally superior in dignity. Totemic knowledge, for example, maintains a radically distinct knowledge from other forms found in society. The difference between Totemic and secular knowledge is not a difference between two sides of the same coin, such as good and bad, right or wrong. The historic use of sacred knowledge has been to maintain a social distribution of expertise and its control through professionals. In earlier times, this was done by priestly classes. With the secularization of world views, knowledge producing occupations and education provide the function of maintaining sacred knowledge in society. Students in teacher education learn to define their tasks-as-teacher in relationship to sacred knowledge.

Some of the knowledge encountered in teacher education is thought of as organized and controlled solely by professionals. Teacher education provides students with certain types of knowledge as having high value, such as history, science or reading. These subjects receive a peculiar characterization as they are incorporated into the life of teacher education. The ideas of history, for example, are redefined through lesson plans, teaching strategies, and outcome statements. A priestly language is made available to students to categorize procedures and rituals for access to the knowledge, such as needs assessment, learner outcomes or consequate techniques. The emergent educational notion of history is more related to a school definition of competence than to the activities of the historian.

A task of teacher education is to have students put aside their own notions about scholarship and childhood and to accept professional interpretations and definitions. School reasoning is differentiated from the commonsense reasoning pupils might bring to school. Students become acquainted with tasks of instruction which seek to have children replace what children know to be the case in their everyday knowledge with non-commonsense, esoteric language of the school. A teacher in Keddie's (in Young, 1971) study of classroom knowledge rejects a pupil's description of an extended family which was derived from a boy's personal experiences. In its place, the teacher seeks to have children accept his category system built around social science words. Mackay (1971) suggests that teachers assume children have no competence in reasoning. He examines the dialogue of a lesson where a teacher asks, "What did it say in the story about Chicken Little ah where the nut fell on Chicken Little?" p. 187. The child's response to the question, "at the tree," was a reasonable answer to the question. Yet the teacher preempts the interaction, treats the child's answer as incorrect and assigns his own scheme of interpretation without any explanation. A purpose of instruction is to impose upon children a peculiar way of reasoning and notion of competence.

Two illustrations can be provided as to how students learn to define educational knowledge as sacred. The first case concerns a recent observation of students learning teaching strategies for social inquiry. Students worked in peer groups with one taking the role of teacher. The task of teacher was to pose a riddle to be solved (inquiry). The tasks of students was to ask questions to unravel the puzzle (inquiry teaching strategy). The questions had to be specifically framed to provide yes-no questions. The questions

also had to be sequentially linked to have students inductively identify facts. When one student made an intuitive leap to provide a solution, she was told the answer could not be accepted because enough prior facts were not stated. Many of the questions posed had to be rephrased because the teacher did not find the language acceptable.

While the peer teaching produced great amusement and excitement, what were students learning about teaching? First, the incident suggests to students there is a special type of knowledge in school. This knowledge is unrelated to students' own experiences. What college student does a term paper or thesis through a game of twenty questions? Second, the characteristics of inquiry were plausible only within a more general context of what the interns know about school. That is, knowledge is held by a wise person, the teacher. Further it is reasonable to gain that knowledge through social relationships which maintain the status and privilege of the teacher. Success is defined as students accepting the teacher's process of reasoning and definition of competence. What is valid knowledge and procedures for testing that validity is imposed by a teacher.

A second example relates to the recent changes in teaching certification which requires students to take specific courses in reading. A particular conception of knowing qua reading is introduced into the consciousness of students through their involvement in professional preparation. Students are asked to work with reading as an independent subject. Reading is given a distinct value in education, equal to other human endeavors such as history science or literature. No longer is reading conceived as a skill existing within a context in which one does science, understands poetry or becomes sensitive to aesthetic dimensions of human life. The teaching of reading is technically treated, consisting of hierarchies of skills and diagnostic tests.

It is not unoften for education students to talk about their sense of mission as "teaching children the skills of reading," or their vocational aspiration "to be a reading teacher."

Socialization of teachers involves students confronting not only a sacred knowledge but legitimation about its distribution in schools. Accompanying existence of a sacred knowledge is a language of teaching which allows for the stratification of that knowledge. Different access routes to the knowledge of school are legitimated by such words as styles of learning, ability, I.Q., culturally disadvantaged or discipline problem. These labels help teachers (and student teachers) maintain norms about appropriate pupil behavior in relationship to mastering the knowledge of school. Where students use labels which refer to different access routes to knowledge, they may have internalized a legitimation of differential distribution of sacred knowledge.

V. THE WORK OF BECOMING A TEACHER

The work of becoming a teacher provides a third dimension for examining the process of socialization. Work is a fundamental human activity in which people act to modify their world. The activities of people build an arena for human conduct, human meaning and human existence. The factory assembly line or the communes of the 1960's maintain social relationships, sources of sentiment and value through their definitions of work. The nature of work also gives direction to how activities should be criticized and the degree of expertise contained in the occupation. (For discussions of work activities, see Bidwell, 1972, and Lortie, 1973).

The typical work activities of teacher education provide students with durable and concrete evidence of the conduct expected of teachers. A student teacher preparing a unit of teaching, having a supervisory conference or standing in front of a group of children directing their communications

provides concrete meaning to rules, status and values of a teacher's role. For example, learning how to assess children;s placement in a basal series may reflect an expectation that there exist universal rules (standards exist which can be applied to all circumstances) and distribute justice (each is given according to his performance). These work activities may also establish what are appropriate social relationships in classrooms and among professionals.

We can talk about the work of students as existing in the social settings of the university and the school. Most of the work of the universith methods course is related to preparing students for the work of classrooms. A student does an experiment to show how evaporation can be taught. A textbook is read about what one does in language arts instruction. A bulletin board is constructed. A teaching unit is prepared. We discussed earlier the peculiar meaning inquiry had in one teacher training program. Implicit in this work is a notion of scholarship about which students are directed to think about their occupation. We need to consider further where university work in teacher education is solely instrumental, the degree of criticism students entertain may remain at that level. The social, political and ethical contexts in which practices originate will be obscured.

The recent emphasis given to competency-based education provides a case in point. (Popkewitz and Wehlage, 1973.) The tasks of competency-based education are to provide greater precision and expertise to the work of teaching. The activities of teaching are subdivided into discrete and particular units of behavior which can be taught separately. The sum of the parts is thought to equal the whole. A consequence of this approach is to provide a form of work which prevents an integration of meaning. Polyani (1966) suggests that the explanation of the different parts of a machine cannot explain how the total machine actually works. Further, when we focus upon the

parts as separate from the whole, we distort our appreciation of the whole and lose sight of the form. Where students learn to work in teaching as a series of discrete actions, they may develop a conception of problem-solving as a standardized activity, consisting of categories and procedures already developed by technicians. Further, the human intent, value and emotions embedded in human action is hidden. This may produce forms of alienation, with students believing control resides outside their personal responsibility.

The work settings of school typically provide different work activities and types of satisfaction for students. Many professors of education and teaching organizations have considered the only "true" knowledge of teaching as on-the-job training. The potency of the concrete experiences of school upon the development of occupational identities is recognized in the sociology of work. Becker (1964), for example, argues that individuals tend to take on the characteristics required by the situation in which they participate. As one moves into the specific situations of teaching, the novice learns the statuses involved and the appropriate behavior with respect to those statuses.

The observations of Smith and Geoffery (1968) provide some indication of the function of classroom work in teacher education as a way of inventing and enforcing classroom beliefs and norms. Geoffery began his teaching job by meeting with the district superintendent and building principal. The notion of good teaching imparted from these encounters was that of good control over children. The beginning days of school for Geoffery were, in part, concerned with establishing an image of success to his fellow professionals. His planned classroom lessons and verbal cues sought to clearly identify routines and work patterns for children that would maintain order. Jobs, such as chalk and

eraser monitor were created and teacher comments provided to establish the behavioral requisites of the job ("Best attendance and best handwriting usually get the assigned job"). Further, Geoffery continually inundated the communications of the classroom with teacher orders to ensure children had learning assignments and were working to complete their tasks. The establishing of consistent routines and work activities provided norms and beliefs Geoffery thought appropriate for the conduct of the classroom. The work assigned to the teacher and children responded to a definition in the school district of good teaching. To the extent Geoffery was able to enforce "discipline" and order, he was given professional recognition.

Some research concerning student teachers suggest a socialization effect in schools that is counter to the intent of preparation programs. Hoy (1967), for example, sought to measure the pupil control ideology before and after a student teaching experience. Control ideology was divided into two types. One was a custodial ideology. This refers to a student's acceptance of a school as an autocratic organization with rigid pupil teacher status systems, a stress on maintenance of order, a distrust of students, and a punitive, moralistic orientation towards pupil control. A second ideology, humanism, was defined as an accepting and trustful view of pupils, confidence in children's ability to be self-disciplinary and responsible. Hoy found that students become more custodial after their student teaching experiences. This occurs, he believes, because the predominant orientation students face in the organization of school life is custodial.

While one could not argue that students should not be in schools, our own socialization study of Teacher Corps interns does suggest that the structural design of field experience does have unintended consequences. Generally, we

found that preparation programs define students field work as job training. It is assumed that the work of teaching is a known quality and an apprenticeship is needed to learn the customs, traditions and behavioral regularities of those in the occupation. The institutional arrangements of teacher education programs have students do work related to acquiring the techniques and practices professionals make available in a school. This work may include standing in front of a small group, teaching an addition lesson, or monitoring the lunchroom.

The irony of the student teaching we observed was that the apprenticeship situations were in schools that were officially defined as failing the children of the poor. Further, as interns entered these schools, our research indicates interns sharply separate what they considered their tasks of teaching from what teachers do. Yet the work activities required interns to do the same lessons, use the same teacher's guides and follow the same administrative routines as the teachers whose perspectives they initially rejected. The very organization of work left the student no time to critically reflect about their work and the social arrangements of the school. The routines and regularities of school life inundated the interns so they were physically exhausted at the end of the day and too tired to critically think about the situations they found themselves. At no point were interns asked to consider the assumptions of the school as problematic or search for alternative ways for children to grow into society. To the extent these situations continue and the gap between teacher's and intern's perspective narrows, the can assume that the field experience has served to socialize interns to the belief system existing in the failing schools.

VI. CONCLUSIONS

The discussion of the paper has concerned socializations as the social

distribution of professional knowledge. Three dimensions were identified as foci of empirical examination. These were: 1) the inferential structures students develop as they participate in teacher education; 2) the ways in which sacred knowledge is maintained, legitimated or rejected; and 3) the sentiments embedded in the work activities student teachers are called upon to do. These three dimensions were further considered in relationship to the possible ethical consequences of certain actions educators take in teacher education.

The empirical investigation of the distribution of educational knowledge involves three further methodological considerations.

First, the functional vocabulary and specific actions of students must be studied. Language assumes its meanings in the specific contexts in which it is used. Researchers must distinguish between the public vocabulary given to describe occupational intentions and the specific words designed to justify teacher's concrete actions (see, for example, Keddie, in Young, 1971). The teacher socialization research we have been doing in Teacher Corps suggest interns have a general language about teaching and a different vocabulary for talking about their specific actions in teaching. Generally interns construct a facade during interviews which expresses what interns want (hope) to do or think they are doing. This language is idealized and tend to provide an avoidance mechanism by creating abstractions that avoid examinations of the concrete situations interns face. Intern language to describe intent in actual classrooms is different. (The attempt to elucidate situationally-bound language is a purpose of Cicourel's (1974) study of the classrooms).

Second, a study of the functioning vocabulary of students needs to occur as students proceed through their teacher preparation program. As a student's career position is modified either spacially (for example spending more time

in schools) or temporally (such as being closer to certification) we can expect modifications in the vocabularies and perspectives (see Becker, 1964).

Third, we cannot assume a vocabulary of motive will have variations from the ideal types discussed previously. Students perspective of teaching will reflect a combining of theoretical knowledge about teaching, practical knowledge and active knowledge gain from interactions with other teachers and children in school. As such we can expect variations of perspectives. Gouldner (1954), for example, found different meanings of bureaucracy as people developed responses to different structural conditions in a gypsum plant. It is the variations of perspectives that develop and its linkages to organizational contexts which need to be identified and illuminated.

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Describing Dynamic Events Within Teacher Education

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DESCRIBING DYNAMIC EVENTS WITHIN TEACHER EDUCATION

Introduction

Schools exist because people believe that human beings are changeable. Schools of education are like other schools in their commitment to that central idea. Schooling is an intentional act. Our expectation is that through the intervention of a teacher education program we can change the consciousness and behavior of students. With respect to their ability to teach, we expect students to become something other and better than they were when they began the course preparing them to become teachers.

Commonsense suggests that it is useful to ask the question, "What are we doing right or wrong in our attempts to achieve our goals for teacher education?" If we can sort out the more from the less productive teacher education experiences we might have more of the kind we want and fewer of those we don't. This has been the form in which most evaluative questions about teacher education have been cast. Yet, as one discovers by looking at such summaries as those by Rosenshine and Furst[1], questions of this type have not produced many answers nor have they created a broad communityof insight and understanding about the meaning and consequences of teacher education.

> Perhaps the beginning of wisdom in the study and improvement of teaching behavior is the concession of our lack of knowledge that can be applied with confidence to a teacher education program. Educational researchers have not provided those who train teachers with a repertoir of teaching skills which indicate to a teacher that if he increases behavior X and/or decreases behavior Y there will be a concomitant change in the cognitive or affective achievement of his students.

We do not see increasingly self-assured proposals for modifying and strengthening teacher education. Instead, it is commonplace to see teacher educators, school people, and students-aspiring-to-become-teachers, distrustful of one another's motives, protective of perceived vulnerabilities, responding to self-doubt, frustration, and anxiety by using one another as convenient

scapegoats.

Young[2] argues that one reason that the conventional questions of educational researchers fail to yield much insight into the nature and consequences of teaching and learning is because these questions take for granted relationships and meanings which should be made problematic and questioned.

We take for granted that teaching is comprised of elements, that if we can only separate them out from one another and specify them we can teach students to act the way teachers should. We take for granted that putting together the bits and pieces of teaching acts - 2700 modules in the Michigan State University model; 818 educational specifications in the Teachers College model - makes someone into a teacher. Esland[3] argues that this objectivist view of knowledge assumes "that zones of knowledge are objects which can be considered to have meaning other than in the minds of the individuals in which they are constituted, irrespective of their human realization." Esland goes on to comment:

> This epistemology is fundamentally dehumanizing...It ignores the intentionality and expressivity of human action and the entire complex process of intersubjective negotiation of meanings. In short, it disguises as given a world which has to be continually interpreted."[4]

We take for granted that after shattering an incident of social interaction into fragments we can label some of the fragments "dependent variables" and others "independent variables." The presumed stability of these relationships permits a research model which seems to be as appropriate for testing the tensile strength of a new metal alloy, the yield of a new species of rice, or the value of a new method of organizing teacher education. In the view of Rosenshine and Furst:

> In order to furnish conclusions which can be applied to teacher education programs we need studies in which 1) the teacher is a statistical unit of analysis; 2) teachers

> or classes are randomly assigned to treatments; 3) observational data are obtained on the fidelity of teacher behavior to the experimental or contrast treatment and on the behavior of the students, while similar observational data are obtained on events in the classroom of teachers who follow their normal procedures; 4) student performance is assessed by a variety of end-of-course tests.[5]

The discussion which follows does not suggest that it is wrong to separate from one another the elements of a complex learning event or that it is wrong to plan experiments which identify independent and dependent variables or wrong to attempt to follow conventional research models. The discussion follows from the belief that it is wrong to take these for granted, that they, and also alternative approaches to studying dynamic events, should be made problematic and studied.

How do we go about making the taken-for-granted problematic? To begin with we can keep an open mind about the characteristics of the event we are trying to study. We need to have fewer preconceived ideas about the nature of the event and more strategies for identifying patterns of interaction and explanatory concepts out of data describing the event as it takes place.

The term "dynamic event" as it is used in the title of this paper, "Describing Dynamic Events Within Teacher Education," is a deliberate redundancy. Such incidents of social interaction as occur in any teaching-learning situation are inevitably events which are dynamic. "Dynamic" refers to certain unifying principles which describe social interaction.

One characteristic of dynamic events is their embeddedness. They are not free-floating and separate from all other such events but are, on the contrary, inextricably a part of a broader socio-cultural context. Dynamic events are also embedded in time. They have a history; other events have preceded and led up to them.

To argue that a dynamic event is embedded in a broader historical and socio-cultural context does not mean that one dynamic event is not distinguishable from another. The event, "the wedding of Leon and Maria Acevedo" is not the same event as the one labeled, "teacher corps member training institute." One lasted hours, the other four weeks; each had its own place of action and its own set of participants; the interactions and their consequences were different as were the meanings and linkages constructed by the participants. If Maria Acevedo was a teacher corps intern who was a member of the corps member training institute, the tendrils of one event reached into the other and helped to form it, but even then no one would find it difficult to recognize the events to be different. Most people would accept the notion that the event which occurred first in time had some impact on the later one. It is also likely that if the later event was in the consciousness of some who took part in the earlier one, its anticipation had some impact too.

The quality of embeddedness does suggest regular patterns of social behavior, routines, and belief systems which form the anticipations and preconceptions which we bring to an event. If the dynamic event is the first week of classes in a University methods course, we might expect to see the class called to order and the discussion focused by the teacher, students raising their hands in order to make it easier for the teacher to manage the discussion, assignments being given to students by the teacher. If we saw actions taking place which were different from those, we might in some cases see these as variations which, though unexpected, were not startling. In other cases we might have to discard our preconceptions and invent new patterning concepts to explain the behavior we observed.

Another characteristic of dynamic events is that they are in process, changing, becoming. Dynamic events may be conceptualized, not as objects external to and in some way independent of their participants, but rather as existing in some significant part in the consciousness and the belief systems of the participants themselves.[6] In such a view the event is created by its members as it takes place through actions and ideas many of which were entirely unanticipated. It is created through the meanings which the participants give to its interactions as these occur. In another sense, the event may be created by the meanings constructed afterwards to link the event to broadly explanatory ideas of self-in-the-world ("I made good friends"; "I learned a lot.") or of ideas of social interaction ("We were more productive learners when we were willing and free to control what and how we learned.")

The qualities of embeddedness and becoming are two very different qualities. One suggests the stability of long and powerful runners interlacing with the extending tendrils of earlier, concurrent, and even anticipated future events. The other suggests both a fleeting, ephemeral quality and the surprise of unanticipated specific combinations from among the infinite variety of interactions which is possible. One reason for studying a dynamic event is to explain or at any rate to comment on the interplay of these two qualities of the event. It is that commentary which is potentially useful for making judgments about the value of a teaching-learning event, either in terms of intended goals or as a guide to people's actions in other and similar contexts.

The conventional study model is difficult to use in this way. It describes what some few participants (teachers) plan to do, how they plan to do it and with whom. Then it attempts to describe the "outcomes" of the event, by describing the way students act, after the event has concluded, in terms of

the goals of the teachers. Now the experience of nearly every teacher is that what we intend to happen in a classroom rarely works out in exactly the way we plan it to, even for that small part of the teaching-learning event of which we are aware. As Parlett and Hamilton have noted, instructional plans rarely stay meekly in their place preceding teaching and learning which is to follow, nor do they often fulfill their function in defining or fixing the dimensions of the teaching-learning experience itself.

> An instructional system, when adopted, undergoes modifications that are rarely trivial. The instructional system may remain as a shared idea, abstract model, slogan or shorthand, but it assumes a different form in every situation. Its constituent elements are emphasized or de-emphasized, expanded or truncated, as teachers, administrators, technicians and students interpret and re-interpret the instructional system for their particular s tting. In practice objectives are commonly re-ordered, re-defined, abandoned or forgotten. The original 'ideal' formulation ceases to be accurate, or indeed, of much relevance.[7]

In short, reporting what one plans to teach, the setting for learning that that person intends to create, and then describing certain actions of some of the members (those labeled students) which are observable after the event has "finished," leaves us with the mystery we had hoped to solve, what produced what? At least a part of the answer to the riddle must lie in that excluded middle part itself, in descriptions of the dynamic event as it unfolds.

Potential Components of Dynamic Events

One component of a dynamic event which would come out of a quality of embeddedness is a set of preconceptions and intentions which the participants bring to it. The plans of teachers and students and their intentions are important to record precisely because they may change, even become unrecognizable, in the swirl of interaction which is to follow. Continual replanning or continual reconfirmation and defense of pre-established plans may be important elements of the event as it takes place.

A second important component of a dynamic event is the physical environment in which it takes place. This includes the time (how early, or how late in the day, following or preceding other events, lasting a longer or shorter time); the place (how roomy, how bright, how gloomy, how much potential for the kinds of teaching-learning planned); objects of instruction (books, charts, video tapes, materials to stimulate interest or organize understandings).

The meanings of a physical environment are not self-evident from its description. Knowing the number of square feet per person in a room does not tell us whether the room is crowded. That judgment is in the interpretation of the participants. Together with several colleagues I have been studying a four-week teacher training event which took place last summer under the sponsorship of National Teacher Corps. One member of our study team is a professional photographer, Jeanne Tabachnick. Several of her photographs[8] show interns in a large auditorium. In most of these photos the auditorium functions in the way that such spaces typically do; the members of the audience are kept apart from each other facing in one direction toward the stage and the speaker's platform and screen at the front of the room. The interns saw this room as a place to listen, to watch, to be informed. The resisted, through non-participation, attempts to make the auditorium into a place for discussion and sharing. One of the photographs is remarkable in showing an exception to this general behavior. A small group of interns is in lively interaction with one another, smiling, appearing to enjoy being together. It is not easy for them to interact in this way because the rows of seats constrain them but some interns are twisted and leaning over, some stand awkwardly among the seats so that they can face and talk to each other. They overcome the space in order to achieve their objective of being with one another. In another photograph

quite a different physical setting is described. In a small discussion room, chairs are arranged in a circle but teacher and students have managed to place a distance between them. The instructor is flanked by empty chairs and he appears detached from the students who are as far away as they can be and still stay in the room. In a physical setting arranged for intimacy the participants have created apartness.

The interaction of the participants in a dynamic event creates a social environment for that event. Out of the particular social situation patterns of interaction develop which reveal background assumptions and shared meanings of the participants. These include the institutional constraints under which they act, the roles and statuses they believe themselves to have, the meaning and characteristics of productive work. Out of this process of social interaction, pre-conceived expectations change. Some actions occur which were intended to happen by the teacher and students; some actions, while unanticipated, seem to justify both the pre-conceived and evolving purposes and styles of the interaction. Some unanticipated behavior, ranging in possibility from confusion or lack of understanding to rebellion, challenges the pre-conceived and evolving purposes and styles of the interaction. During the four-week Corps Member Training Institute (CMTI) referred to earlier, students and teachers brought pre-existent ideas about the roles of teacher and student with them to the institute. Encouraged by the style of presentation and organization during the first part of the institute and also encouraged by the modeling behavior of status teacher-leaders, participants (both teachers and students) negotiated meanings for student and teacher roles which were different from the pre-conceived notion about roles they had brought with them. The student role came to be seen as active and controlling with respect to what was to be learned and how. At one point, the directors had invited a speaker to come and address all interns

at once (in that auditorium). Some small working groups refused to interact with the speaker in that kind of social context. Their group leaders carried their case into direct negotiations with the directors. Eventually the speaker arrived and found himself being used in several different ways. Some groups joined together and attended a lecture. Some groups insisted that they would hear the speaker only if he would take part in a small group discussion with them. At a later point in the institute when a new set of directors and group leaders appeared, tensions resulted from differences in beliefs about student roles and teacher roles, brought with them by the new teachers, and the meanings which students had negotiated with the earlier group of teachers. The new set of teachers were clearly startled at the unwillingness of students to play expected roles and surprised by the intensity of the response of some students. Again, negotiations occurred and roles somewhat different from those anticipated by the new group of teachers, and quite different from those developed during the first part of the institute, came to be established.

Plans and preconceptions, physical and social environments do not exist as separate components of a dynamic event. One could say that they exist simultaneously and inter-penetrate one another but even that would distort the sense in which they are used here. They are simply different ways to think about the event. What unifies them is the ethical-psychological environment which is formed by the personal point of view of each of the participants in the event. We have seen that personal meanings contribute to socially negotiated and shared meanings both for the objects and spaces of instruction and for patterns of social interaction. Each participant brings a personal history to a dynamic event and gives to the event personal meanings which are only partially sharable.

One of the major goals of the four-week Corps Member Training Institute was to provide a rich multi-cultural experience for the interns. Working groups were constructed to be deliberately multi-cultural in their membership. Descriptions of informal social interaction (e.g. choosing tables and eating companions, joining and interacting in informal social groups) report relatively little time spent informally together by people of different cultural backgrounds. An analysis of interpretations based upon some standard unit, such as the amount of time spent in multi-cultural informal activities given the total possible time available for such interaction, might produce the interpretation that as a multi-cultural experience CMTI was only moderately effective. Extensive interviews with interns, both during the four-week period and in follow-up visits during the succeeding school year, reveal quite a different pattern of personal meanings assigned to the event by those who took part in it. It is described consistently as a rich and powerful multi-cultural experience. In remembering the summer, interns refer again and again to the impact made on them by the opportunity to know people from different cultural backgrounds in an informal social context. As seen from the personal perspectives of the interns, CMTI was a smashing success as a multi-cultural experience.

Describing Dynamic Events

A conventional model for studying dynamic events treats these events metaphorically as though they are objects which can be manipulated, fragmented, controlled, and shaped into meanings which are both unchanging and everywhere understood.[9] The discussion this far has sketched the outlines of an alternative conception of a dynamic event, one in which qualities of embeddedness and pattern interact with qualities of becoming and the surprise of unanticipated actions. The subjective views of the participants (including those stydying the event) are an essential element of the event. They are not an impurity to be neutral-

ized or removed; these subjective views are the element of the event which infuses it with the meaning it will come to have in the broader flow of human events.

Using Varied Descriptive Techniques

We have been taught to come a-measuring with the most precise and inflexible descriptions possible of the behavior that interests us. As has already been stated, this assumes that this behavior (for example, reading, or decision-making, or asking-for-opinions) can be described with minimal distortion in isolation from its social surround. It seems reasonable to expect that a target is easier to hit if you know what and where it is and get it sharply in focus. Except that the target in the metaphor is not an object but the more diffuse and yet-to-be-created or yet-to-be-defined behavior which is part of some social interaction. Also, the behavior that is targeted is rarely the behavior (reading ability is inferred from marks on paper).

Categories which are precisely specified in their dimensions and meanings are usually invented in advance of the event to be studied. While these operational categories may be useful in helping to understand a dynamic event, they may distort the meanings of the event by forcing the action to fit into pre-established categories. For example, we can ask, "What questions do teachers ask? What percentage of these questions ask for information?" These are not uninteresting questions, but by themselves, in addition to fragmenting the behavior we wish to study, the questions focus our attention so sharply that we are likely to overlook information essential to the description we hope to produce.

Categories which are more loosely defined than operational categories can help us anticipate and organize the action of a dynamic event. These orienting

categories[10] would be open to change and development as a result of encountering the action being studied. A general, somewhat tentative statement about teaching behavior, for example, might direct attention to actions that clarified thinking, gave information, challenged beliefs, or the like. We might discover teaching being done by people labeled "student" or that certain forms of teaching were carried on by status teachers while other forms were carried on by status students.

Still a third type of explanatory category is one that is not developed in advance of the event but is invented during or after the event. These empirical categories are useful when anticipated categories do not pattern the actions being observed in such a way as to suggest plausible explanations.

While another paper in this symposium will deal with problems and techniques for describing dynamic events, it is clear that a variety of descriptive techniques will be needed to identify plans and pre-conceptions, the action of the event itself, and the view backwards of "experience recollected" whether tranquilly or not. Prominent among these descriptive devices will be systematic observations. It would be inconsistent with the conception of dynamic event developed here to expect observing to go on unobtrusively. Rather we would expect the observer to become a part of the event, whether recording with pen and paper, camera and film, or in some other form. We would expect the observer to be recognized and his/her function to be understood by the other participants. Descriptions should make clear the observer's presence; interpretations should take that presence into account.

Interviews with participants are essential as a device for getting at some of the personal meanings which they assign to the action. Interviews can help confirm interpretive statements about intentions, interactions, and linkages with the broader socio-cultural context. They can also help interpret the

meanings of statements, diaries, teaching performances or other work-products collected for analysis, as well as the meanings of responses to surveys of attitude and belief.

Observing and photographing, interviews, surveys of participants' work products, beliefs, and feelings, can be used together to produce statements which describe a dynamic event. How can we use such a description? Not to replicate the event. If the essential character and meanings of a dynamic event are determined largely by situational variables then replication is a logical absurdity. Only a very limited predictability would be possible, depending upon situational similarities and patterned social behavior and background assumptions about social relationships rooted in the broader socio-cultural context.

These descriptive analyses can demonstrate the dynamic event. Enough information about intentions and pre-conceptions, about physical, social, and personal environments, enough plausible interpretive statements about the event can be produced to create in strangers some insight into its dynamic qualities.

To say this much is not to suggest that the plans and actions of teachers can be duplicated elsewhere in order to produce identical actions by other students. First we would need to know some of the background dimensions in our own settings. Next we could examine the descriptive analysis of the dynamic event for echoes, analogies, similar social patterns. Socio-cultural and situational characteristics will determine how much and in what way the description suggests action in another setting, in what ways elements might be selected, changed, adapted for use.

It is the intervention or mediation of potential users which makes wider applicability possible. Through tnat intervention the stranger-user participates in the analysis. It is that participation which may transform studies

of teacher education, changing these studies from being intellectual toys into becoming a force for improving practices in the preparation of teachers.

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Problems in Analyzing Dynamic Events Within Teacher Education

Technical Report Number 20
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PROBLEMS IN ANALYZING DYNAMIC EVENTS IN TEACHER EDUCATION

The purpose of this paper is to reflect on the activities of the CMTI Study Team from a methodological perspective. It is our intent to draw your attention to three points:

1) That any methodology used by an investigator must first reflect the reality of the event being examined.
2) That the typical methodologies often used to study teacher training events are too limited in that they fail to capture the reality of such events.
3) That there are methods of inquiry which can be adapted to the study of teacher training events which, if used, allow one to examine and, if clever, capture some of the reality of such events.

The Reality of Dynamic Teacher Training Events

When collaborating on the study of any phenomena the methodologist must first ask "What are the questions that need to be answered?" Once those questions are determined, the essential characteristics of the phenomena must be identified so that a plan for data collection, analysis and documentation can be established.

For the Teacher Corps' "Corps Member Training Institute" (CMTI), the policy mandate to the Study Team was to demonstrate, implied that the Study Team was to identify, to document, to judge, and to communicate some features of the event that were successful or unsuccessful.

The language and meaning of this mandate leaves no doubt that the need for demonstration is more than most standard meanings given to program evaluation in at least two important aspects. First, the responsibilities for demonstration

include more than the documentation that certain objectives were attained and others were not. Such documentation does not communicate enough about the training procedures to other staffs who may want to try these procedures in their own settings. Second, demonstration is not merely the collection of all program residue. The responsibility for communicating specific training procedures and their successes and failures under certain program conditions to individuals not involved with the program requires more than a collection of all the instructional materials used in the program. Yet so often we see investigators when asked to show a training program to an outsider respond by collecting their materials. They rely upon an effective display to show that the program should be reproduced at another setting. That kind of information is both too much and too little. It is too much of the content for an outsider to place into a meaningful context and it is too little of the rationale, intentions and specific instructional procedures used to make this content meaningful.

The purpose of demonstration is to communicate to those not originally involved with a particular program the salient features of the program. The overriding question is: What does an outsider have to know to try some of the specific features of the training strategy in another setting? Thus, the special challenge of demonstration can be stated as "describing the successes and failures of specific features of a training program for possible replication at other sites." The underlying meaning of demonstration is to be found in the implications of the phrase "for possible replication at other sites." In fact, it is the meaning of the word "replication" that must be understood.

In teacher training we never mean replication in a strictly scientific sense. No training event can be replicated, if by "replicated" we mean that

the event can be made to reoccur precisely as it once occurred. The 1975 CMTI, for example, could not be replicated even if one chose the same instructors, the same interns, and returned for another month at Richmond. Nor does the word "replication" mean adoption. Adoption is to make an outside program one's own by selection or assent. It implies little or no change of the outside program. Rather the word "replication" implies adaptation. Adaptation suggests significant change of the original. Adaptation of an instructional process or a program is not only to alter some salient features of that program but to alter those features of that program to meet one's own needs. The complexity of most educational environments necessarily implies that the meaning of program replication is the identification of features which can be adapted for use in other sites. For example, one of the initial features of CMTI identified by the Study Team was the "esprit de corps" that was created and maintained during the training session. This apparently important feature of CMTI could undoubtedly be replicated (adapted) in other training settings.

In summary, when adaptation is expected from program demonstration, the responsibility of the demonstrator goes beyond documenting effectiveness and displaying program materials. The responsibility extends to identifying, to describing and to judging the value of features which others may adapt for their purposes. The identification of salient features embedded in an instructional program which may (or may not) be adaptable is not a simple task. In short, the difficulties of program replication place creative responsibilities upon those undertaking program demonstration.

Characteristics of Dynamic Events. The salient features to be demonstrated for CMTI are those which characterize dynamic events. The adjective "dynamic" has been deliberately chosen to describe teacher training events because they have the following characteristics:

1) They involve humans interacting with each other

2) They occur over time

3) They are concerned with some substantive content

4) The content is brought out over time through an interactive process

5) Organizing 1, 2 and 3 into an event is deliberate in order to have effects or outcomes on the participants.

Furthermore, the interactive process is not static. The variety of participant responses often changes the content and direction of the event, some outcomes are often embedded within the process itself, each event is occurring within a larger and complex learning milieu, and the apparent content of the event shifts and changes when viewed from different personal and time perspectives. Presumably, to understand what happens in a training event, one must have a description of the event itself which illuminates these characteristics. In particular, any event must be considered as a mixture and interaction of physical, social and moral-psychological environments. The physical space (time, place and objects) in which an event occurs is suggestive, facilitating and constraining, with respect to what occurs. What people do and say to and with others--both "direct" observable behavior (naturally occurring "free" actions and responses)--are part of every event. And finally, the intentions of all the participants shape and give meaning for each individual to each event. Salient features of demonstrated events are not definable in a conventional sense. Features of dynamic events are planned and have a definite structure but the embedded patterns of interactions cannot be entirely anticipated.

The methodologist's task is to identify procedures which capture the patterns of interactions in order to describe the course of events and predict effects. One must use theoretical constructs of social interactions, or operational categories

based on an empirical examination of the event to identify patterns. And again, effects are not just terminal outcomes; effects include how ideas develop and change over time.

In summary, our first point was that the methodology used must reflect the reality of the event being examined. For the CMTI Study Team this was interpreted to mean that we were to demonstrate the salient features of an evolving, interactive, teacher training event so that they could be adapted by others for use in their teacher training situations.

The Inadequacy of Standard Evaluation Methods

Standard methodologies are not useful for demonstrating teacher training events because they are too limited. They fail to provide adequate information for policy decisions, they provide insufficient data about the dynamics of the event for an understanding of the event, and they provide too little useful information which one could use in replicating features of an event.

Although the information presented here is not new, we felt obligated to point out these inadequacies for two reasons: first, in the past, evaluators of Teacher Corps projects have primarily used such methods; and second, it has been our experience that many teacher educators are unaware of the limitations of standard evaluation methodologies.

Fox (1976) in analyzing and summarizing prior evaluations of Teacher Corps projects has characterized those as employing either a "one shot case study" pre-experimental design or a "one group pretest, post-test" pre-experimental design (Campbell and Stanley, 1963). These are two of a set of conventional designs borrowed from an agricultural experimental paradigm. In general, this methodology is based on three key assumptions: 1) treatment effects are additive, 2) treatment effects are constant, and 3) there is not interference

between different experimental units. Before explaining these assumptions and discussing their consequences, the three terms--treatments, effects, and experimental units--must be understood.

Treatment. The objective of most agricultural experiments is to compare the yields of a number of plant varieties, fertilizers, or soil characteristics. The term "treatment," for example, might refer to the fertilizers being compared. For training events "treatment" translates to a specific instructional plan. Recently this has been accomplished by developing instructional modules based on specified behavioral objectives with explicit instructional routines. In extreme cases these instructional routines are controlled by programmed texts or scripts to be followed.

In reality most training events cannot be so explicitly planned. The difference between what is planned and what actually occurs is considerable. This difference is both natural and beneficial. Training events are not mechanistic routines to be blindly followed. Real events grow, change, and develop as the human beings involved in the event interact. In fact, it is the actual patterns of interactions, rather than the intented treatments, that are the important features of training events for policy makers, other researchers and replicators.

Effects. The term "effects" refers to yield or end product of a treatment. In education this translates to assessment of performance at the termination of the "treatment." This is now most often accomplished by developing criterion-referenced tests based on the behavioral objectives of the treatment. Such terminal assessment captures only intended performance outcomes not underlying outcomes or unintended outcomes and completely fails to capture what happens

before, during or after the event. Furthermore, too often intended performance outcomes are identified only in terms of new concepts to be learned. Such an emphasis on predetermined symbols and their manipulation is inadequate for all but the most trivial of human interactions with new information. It misses the personal meanings of the new information and the integration of these meaning with past (and future) experiences. These "other" outcomes are of essential importance for replication.

Experimental Unit. The term "experimental unit" refers to the soil plots or "the smallest division of the experimental material such that any two units may receive different treatments in the actual experiment" (Cox, 1958, p. 2). In educational training events the "experimental unit" thus should be the population taking part in the event. However, even though most training events are carried out with groups, individual students are often used as the experimental units. The consequences of using this incorrect experimental unit are disastrous with respect to the three assumptions underlying conventional methodology.

Treatment Effects Are Additive. The mathematics of determining experimental effects is based on Equation 1 (Cox, 1958, p. 14).

1) $y = u + t$

Equation 1 says that the total quantitative effect or yield (y) after a treatment can be broken down into two subquantities: u--a quantity depending only on the particular experimental unit, and t--a quantity depending only on the treatment used.

There are three immediate consequences of this assumption. The first is the quantifiability of all three terms--y, u and t. While it is true that one mark

of a mature science is the possession of sophisticated measurement instruments and techniques, we must admit that at present in education we are not able to quantify with any validity or accuracy many terms in an educational setting. For example, one anticipated treatment effect of CMTI was that the participants would share in a meaningful multi-cultural experience. The photographic essay, "Together," (Tabachnick and Lemes, 1975) was prepared as a means of documenting (but not quantifying) the actuality of that experience.

The second consequence of the additivity assumption allows the possibility for adding or subtracting these treatment effects in an algebraic manner in order to remove the quantity depending upon the experimental unit. If a "control" group is used that does not receive the treatment, then Equation 2 shows the total "effect" measured when no treatment is administered.

$$2)\quad y_c = u$$

Subtraction of Equation 2 from Equation 1 gives an estimate of the effect due only to treatment (see Equation 3).

$$\begin{aligned} y_t &= u + t \\ -y_c &= u \\ \hline 3)\quad y_t - y_c &= t \end{aligned}$$

Equation 3 says that one need only have the measurements of the total quantitative effects after treatment (y_t) and for control group (y_c) to estimate the effect due only to treatment (t).

The third consequence of this additive assumption is the possibility of estimating differences between two treatment effects. If measurements are taken after two different treatments, they can be subtracted. The following set of equations shows this algebraic process.

$$y_1 = u + t_1 \qquad \text{(Measurement after Treatment 1)}$$

$$\underline{y_2 = u + t_2} \qquad \text{(Measurement after Treatment 2)}$$

$$4) \quad y_1 - y_2 = t_1 - t_2$$

Equation 4 says that the difference between the final measurements after Treatments 1 and 2 ($y_1 - y_2$) can be considered to also be the difference between the two effects due only to Treatments 1 and 2 ($t_1 - t_2$).

Note, however, that Equation 3 and Equation 4 are correct only if the effects depending on the unit (the u's) are equal for different units. These conditions are assumed to be true when there is no systematic bias which differentiates the experimental units. Control of bias is usually accomplished by random assignments to an appropriate experimental design. In fact, true control groups are not often feasible in teacher training situations. Even where alternate treatment groups are possible (Equation 4), they are only helpful in estimation of the program's effect if the treatment effect of the other treatment were known--presumably from another experiment which employed a true control group.

Many investigators use the pretest in the "pretest-post-test" design as a measure of u.

$$y_t = u_t + t$$

$$\underline{- \; y_p = u_p}$$

$$5) \quad y_t - y_p = t$$

The resulting equation 5) indicates that the treatment effect (t) is equal to the difference in pretest (y_t) and post-test scores (y_p). Obviously equation 5 is valid only if the unit term is the same before (u_p) and after intervention (u_t). However, as Campbell and Stanley (1963, p. 8) so forcefully point out, there

are several sources of potential invalidity to this assumption such as history, maturation, instrumentation and test treatment interaction. Investigators simply cannot blindly use gain scores as estimates of treatment effects.

Also, because of this additivity assumption an evaluator is primarily concerned about the measurement of specific attributes only at the end of treatment. The focus of this concern is on validity. The interences of the results depend upon the extent to which the measurements are valid. The researcher must defend (or is criticized upon) the various ways in which validity can be established (construct, content and criterion-related validity). Once validity can be established, results are verified.

Unfortunately, while validity of terminal assessment is important, it does not address questions about the identification of the treatment as it involves the patterns of interactions between treatment and subject or the extent to which the effects of one treatment are actually "added upon" the effects of another treatment. In education, not only are these later concerns most crucial to treatment replication but they should also be more open to critical inspection.

Constancy of Treatment Effects. In an attempt to increase the generalizability of the findings, most evaluators replicate the training procedure either by using the basic training program in two or more settings, or by using each individual subject in a single training setting (every subject is a replicate of every other subject). In either case, one must assume that treatment effects are constant. This assumption says that treatment effect does not change

when the treatment is given to two different units. Algebraically, this assumption allows Equation 6 to represent the measured effect after a specific treatment on one unit (u_1), and Equation 7 to represent the measured effect of the same treatment upon a different unit.

6) $y_1 = u_1 + t$

7) $y_2 = u_2 + t$

Since treatment effect is assumed to be the same for these two different units, the subtraction of Equation 7 from Equation 6 states a very important consequence of this assumption (see Equation 8).

8) $y_1 - y_2 = u_1 - u_2$

Equation 8 states that if two different experimental units (u_1 and u_2) receive the same treatment, then the differences in effect (y_1 and y_2) are only due to differences in units. With this assumption, when one compares the end of treatment measures, one is also comparing the differences between the experimental units. Note, following this argument, if u_1 and u_2 were identical units, the difference in treatment effects should be zero. However, if aspects of training procedures are adapted (not adopted) for use with different populations, one would actually anticipate different treatment effects. That being the case, it would not be possible to arrive at Equation 7. Thus, the conclusion that one is comparing differences between units when one compares measures at the end of the same treatment is false.

This problem is especially acute when one uses individual students as the experimental unit. As students are exposed to new material we expect them to assimilate those new ideas into their own personal meanings or ideational scaffolding. We <u>expect</u> the same training event to have different effects on

different students. Some will assimilate and use lots of new information in one way, others may generate quite different kinds of new information and relationships. Psychologists now are generally agreed that unless the influence of individual difference variables is considered, predicted outcomes of training events will be masked by within-treatment variation. Persons indeed do differ in how they respond to the same information or the same instructional procedures. Thus, the assumption that treatment effects are constant is simply false in many teacher training circumstances.

Lack of Interference of Experimental Units. This assumption says that when more than one experimental unit is used, there is no interference or interaction between the units. This assumption is particularly important if statistical analysis is to be made of the observations since the statistics are based on an assumption of independence of observations (or unit measurements). If the experimental units really were independent classes, then one might argue lack of interference between the classes. On the other hand, in teacher training events, if students are the units, this assumption is clearly false. Such interference between units is the essential interaction between human beings one expects in dynamic events. In fact, investigators have typically assumed that the treatment effect for a class is simply an aggregate of individual effects. The argument is usually that "we teach pupils, not classes." This simply is not the reality of dynamic events. By assuming no interaction the researcher closes his eyes to the essence of the event.

In summary, the basic assumptions underlying the conventional methods of inquiry are not met by the reality of dynamic training events. One can only conclude that conventional methods of inquiry are not appropriate for the demonstration of dynamic training events.

An Alternate Methodology

Identifying the salient features of dynamic events for demonstration will depend upon the extent to which an investigator can capture and communicate those features. Fortunately, there are methods of inquiry which can be adapted to study such events. For example, the problem of evaluating a program within a complex learning milieu, has been addressed by Parlett and Hamilton (1972) who suggest the concept of "illuminative evaluation": an intensive examination of the evaluated program through a variety of strategies in order to help illuminate significant program features. Another example is the work being undertaken by Glass (1975) who is adapting the techniques of time-series analysis to the problems inherent in the examination of treatment effects over time. A third example is the "provess development" model for curriculum development and evaluation suggested by Romberg and Hernandez-Nieto (1976) that responds to special evaluation problems inherent in the nonlinear characteristics of instructional processes as well as human development.

What we have done is to combine features from a variety of sources into a dynamic, evolving method of inquiry we are calling "Process Impact Evaluation." "Evaluation" because we are indeed attempting "to judge or determine the worth or quality of" (Webster's New World Dictionary, 1970, p. 484). The referent of evaluation is a "product." For CMTI the process of instruction used in teacher training events, "worth or quality" has been defined in terms of demonstrable features of training events. The term "process" has been used to emphasize the evolutionary processes involved in training events. Such events have two main features which have helped us in developing this alternate methodology--they are time embedded, and they evolve (have a becomingness). Time is important both as a basis for describing training events (events start, progress and end), and as a variable that characterizes events. Becomingness

is important since outcomes are not just yield. One must look for intended and unintended outcomes. Thus, multivariate-multilevel information is critical. In addition one must try to capture how these many outcomes grow and evolve over time (including before, during and after the event). Finally, since such events involve humans we must know how they interact--spend time. From these considerations the following notions of design, intervention and observations were used.

Design

The design used in the CMTI Impact Study is "time-series." Campbell and Stanley (1963) drew educators' attention to this design and labeled it "the interrupted time-series quasi-experiment." They also discussed the statistical analysis difficulties associated with that particular design. Since 1963 the utility of the "time-series" design has been endorsed in several textbooks and articles but rarely actually applied to educational research. The reasons for lack of use fall into two categories. First, a misunderstanding, somewhat perpetuated by Campbell and Stanley, that the intervention was necessarily of short duration (such as the effect of passing a law). It can and is most often used in economics to monitor what goes on before, during and after a prolonged intervention. And second, the more important reason for lack of use has been the difficulties with statistical analyses. However, at this time considerable work has been done on time-series analyses. The best summary is by Glass, et. al. (1975) in their book Design and Analysis of Time-Series Experiments. In that work they describe eight different time-series designs. These eight designs are summarized in Table 1, page 67. The varieties of intervention effects which could be examined are listed in Table 2, page 68.

The intention of a time-series design is to monitor ongoing events. The result of this monitoring is to plot a series of points such as the series of

points indicated in Figure 1, page 69. This series of points (joined for illustration) shows rankings on the five perspectives on teacher tasks during CMTI. See Figure 2, page 70 for a second example from CMTI. One can examine the graphs to determine either change in level or change in direction by using graphical or spectural analysis techniques. These are not new techniques. They have been commonly used in engineering and economics for several years. However, to develop data from human beings raises several problems. First, the usual required number of points is too large (spectural analysis is usually done with no less than 200 data points). The second problem is statistical dependence. Human beings being retested have a tendency to remember how they answered the same questions rather than responding independently. And third, very often in education we are interested in multivariate effects rather than univariate effects. To date no multivariate models have been developed for testing effects of time-series studies. Nevertheless, in CMTI we used a combination of a "single group multiple I design" (for the summer training program) and a "stratified multiple group single I design" for their project experience in the field (see Figure 3, page 71).

Interventions

There were three interventions: first, the two-week training session on organizational characteristics; second, the two-week training session on instructional techniques; and third, the on-site training in Teacher Corps Projects. These three interventions were not under the control of the CMTI Study Team. In addition, while there was an overall instructional plan, the training events evolved over time in ways which were not completely anticipated by the instructors.

Observations

The observations used in this design were of two types. First, objective assessment via the use of surveys. Ideally for an impact study one would develop a multivariate-multilevel objective assessment procedure. These procedures are multivariate, in that several variables would be studied simultaneously and of necessity treated as independent (because of the limitations of the statistical analysis procedures associated with time-series designs). Since it is clear that the set of variables would not be independent, the reporting of results must be carefully judged in terms of the overall set of variables. The basic battery that was developed and administered by the CMTI Study Team was multivariate but only at one level. The CMTI survey battery included five instruments: teacher tasks, intern tasks, school success, school failure, and expectations. On each instrument five dependent variables were judged; namely, teaching as personal development, teaching as technique, teaching as curriculum development, teaching as community involvement, and teaching as organizational behavior.

In each of the four surveys the interns were asked first, to rank order each set of five items and second, to determine the value of each of the items to themselves. For example, Figure 4, page 72 shows one set of five items from the tasks of an intern survey. Each item in this set is an examplar of one of the five perspectives. The tasks of an intern survey contains five sets of items similar to the set given below. Each survey was then administered several times. Multilevel would mean that the data should be gathered at more than one level. An initial level would include assessment related to the objectives of instruction (usually the concepts and skills one would expect to master during instruction). At subsequent levels underlying effects would be probed.

The CMTI Study Team did not collect assessment data on objective. The instructors of both initial interventions did collect that information. In future designs, it would be advantageous if systematic data were gathered at this intended outcome level. The instruments developed by the CMTI staff were intended to measure a second level of socialization to teaching.

To reduce the statistical dependence of observations and to reduce the amount of testing time involved in this study, matrix sampling was followed to gather the data. A small number of students at each observation time was administered a portion of the total battery. Estimates of population characteristics were derived from those subpopulations.

The second part of our data collection scheme was to gather subjective assessment data in order to give meaning to the objective data. The objective data alone simply yields numbers (points on a graph) but fails to give a clear understanding of the salient features of the program. Thus, observations, interviews, and photographs were used to give meaning to the data. The procedures used were adapted from the field study techniques of anthropology-sociology. Communicating the results from this study involves knowing the interventions, how they evolved, and summarizing the objective and subjective data. From this rich data base it is anticipated that consistent patterns can be reasonably identified and communicated to others.

Summary

There are methods of inquiry which can be adapted to the study of teacher training events and if used would capture some of the reality of such events. However, the methods are not easy to use. We are not claiming we have found any panacea to the problems of assessing and evaluating teacher training programs. What we are claiming, however, is the need to expand one's conceptualization of

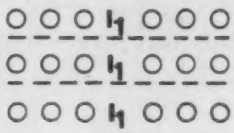
evaluation for such events to the identification of salient features which can be demonstrated. We do believe that the combination of a multivariate, multi-level data gathering approach, a time-series design and field study procedures involving observation, interview, and photography are useful as a collaborative technique for identifying the important characteristics of teacher training events.

A

Single-Group--Multiple-I

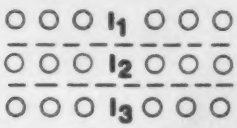
B

Multiple-Group--Single-I



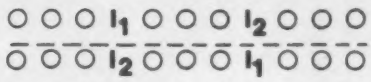
C

Multiple-Group--Multiple-I



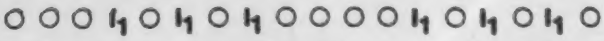
D

"Reversal" Design



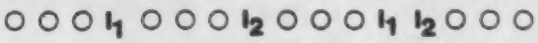
E

"Operant" Design



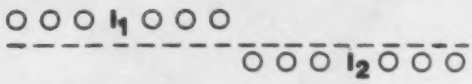
F

"Interaction" Design



'G

Sequential Multiple-Group--Multiple-I



H

"Stratified" Multiple-Group--Single-I

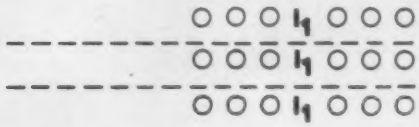
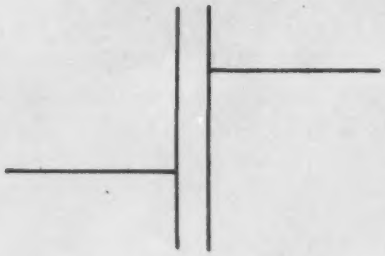
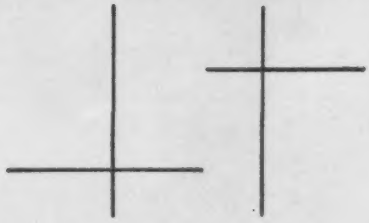


Table 1. Variations on the basic time-series experimental design. (Glass, et. al., 1975, p. 20)

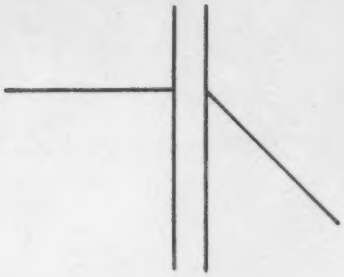
A. Abrupt change in level, temporary intervention.



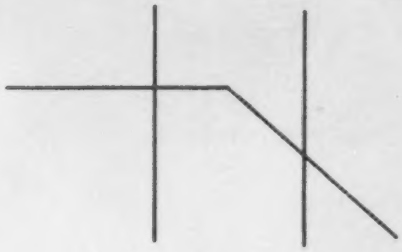
B. Abrupt change in level, more continuous intervention



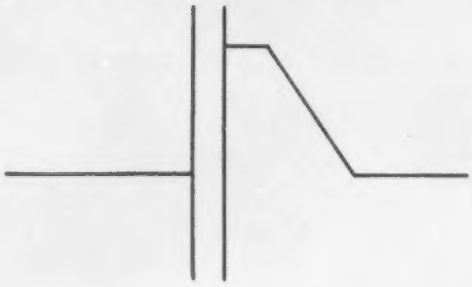
C. Abrupt change in direction, temporary intervention.



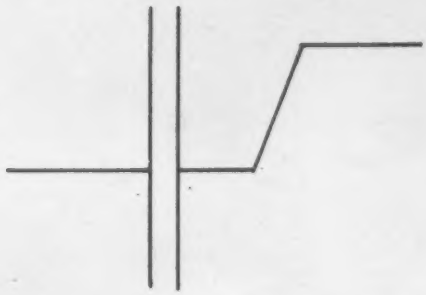
D. Abrupt change in direction, more continuous intervention.



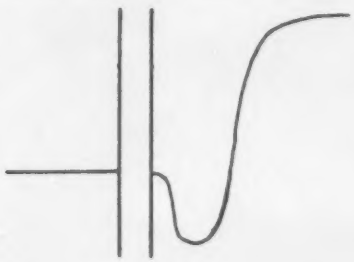
E. Temporary change in level.



F. Delayed change in level.



G. "Evolutionary operations" effect.



H. Change in variability.

Table 2. Varieties of intervention effects in the time-series experiment. (Glass, et. al., 1975, p. 44)

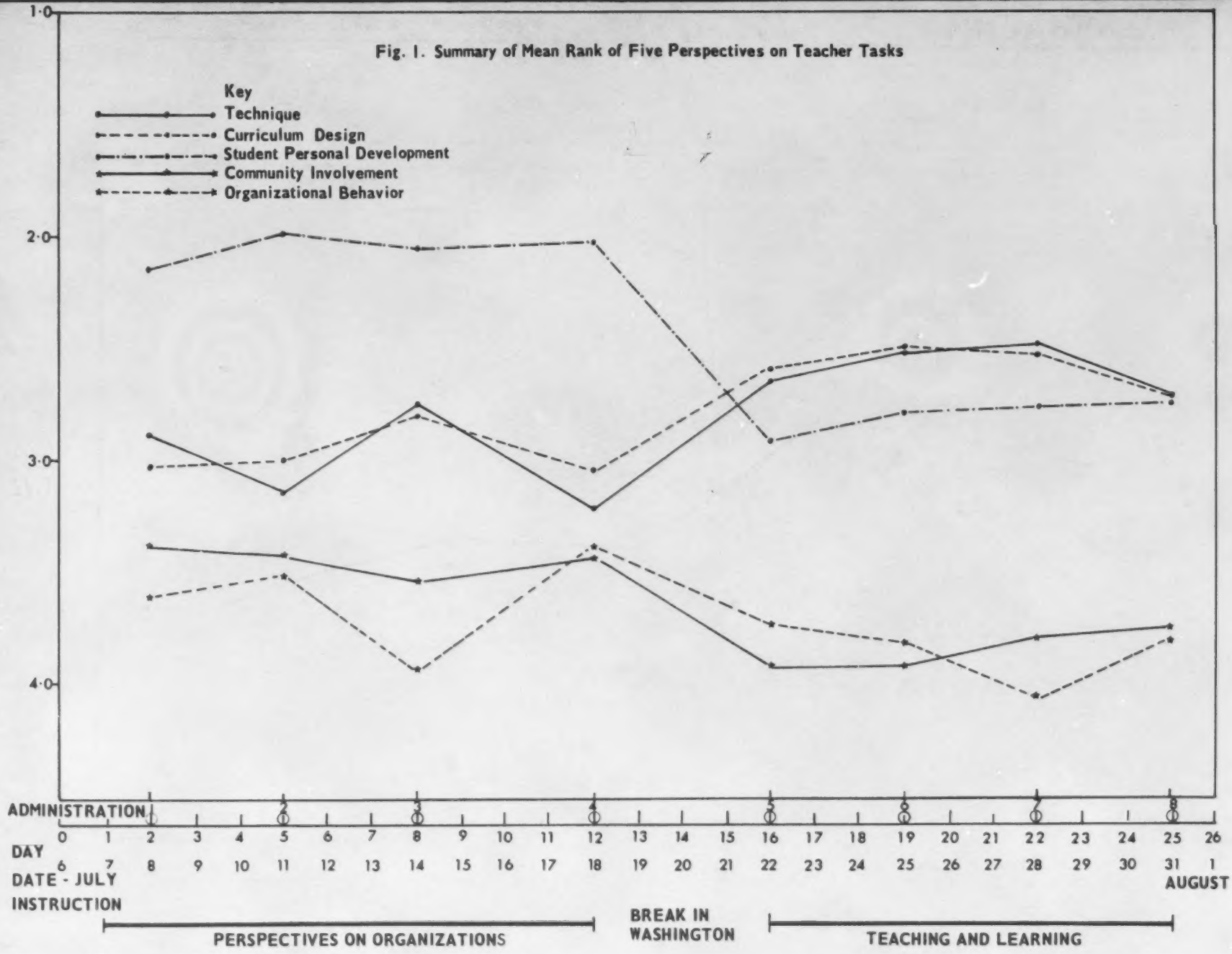
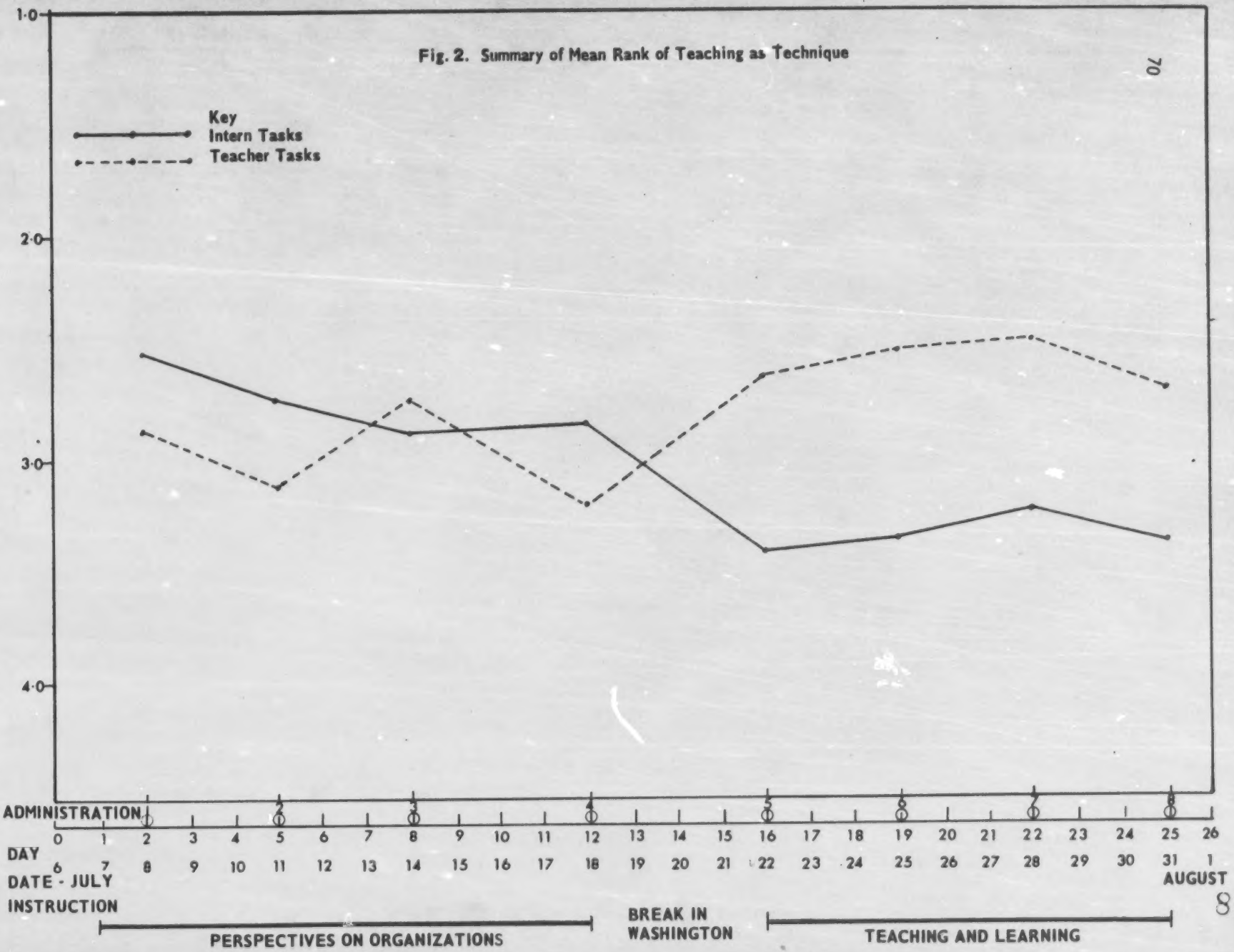


Fig. 1. Summary of Mean Rank of Five Perspectives on Teacher Tasks
Key
Technique
Curriculum Design
Student Personal Development
Community Involvement
Organizational Behavior
1·0
2·0
3·0
4·0
ADMINISTRATION
DAY
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
DATE - JULY
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1
AUGUST
INSTRUCTION
PERSPECTIVES ON ORGANIZATIONS
BREAK IN WASHINGTON
TEACHING AND LEARNING

81

82

Fig. 2. Summary of Mean Rank of Teaching as Technique


Key
Intern Tasks
Teacher Tasks
1·0
2·0
3·0
4·0
ADMINISTRATION
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
DAY
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1
DATE - JULY
AUGUST
INSTRUCTION
PERSPECTIVES ON ORGANIZATIONS
BREAK IN WASHINGTON
TEACHING AND LEARNING

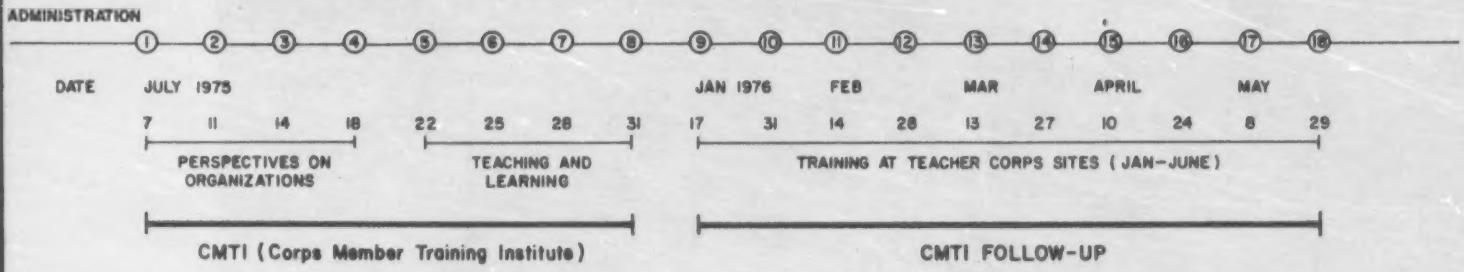


Figure 3. Schedule for Survey Administrations

Figure 4. Sample of one set of items for Intern Task Survey.

V. My tasks as an INTERN are to learn how to:	A. Rank Order	B. Value to me
a. Create an atmosphere in which students are encouraged to take initiative.	____	high O O O O O low
b. Use techniques which encourage students to work independently	____	high O O O O O low
c. Become active in the policy making mechanisms of the school and school district	____	high O O O O O low
d. Participate with community members in community-awareness programs	____	high O O O O O low
e. Design activities that help students understand their social environment.	____	high O O O O O low

Please check to see that you have answered both A and B for all tasks.

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The Ethics and Politics of Evaluation: Clients, Patrons and Casualities

Technical Report Number 21
1975 CMTI Impact Study
sponsored by Teacher Corps
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Gary Wehlage

CMTI Impact Study Team

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"The Ethics and Politics of Evaluation: Patrons, Clients, and Casualties"

Introduction:

A recent article in School Review by Robert Crain and Robert York raised anew some fundamental issues regarding bias in educational evaluation. (School Review, February, 1976) The authors point out that they held a certain bias which took the form of an assumption about the general ineffectiveness of federal social action programs in the schools. This bias came very close to preventing their evaluation from uncovering positive effects that accrued from a specific program, the Emergency School Assistance Program. Because Crain and York recognized in retrospect the influence this general bias had over their particular evaluation, they reassert a traditional standard of scientific research: *"The lesson is that those introductory lectures we all received on the necessity of objectivity in science have to be taken very seriously. The recognition that social science cannot be value free is not a license to allow our biases to contaminate our analysis. . ."* (Crain and York, p. 252).

The reaffirmation of this standard is particularly important at this time because there are signs on the horizon of a credibility problem in the field of evaluation. (see Denham, PDK, April, 1976) This credibility problem has developed, in part, because as evaluators we have failed to define objectivity within an ethical and political framework. Too often we have defined objectivity only as a set of methodological techniques dealing with such things as sampling procedure. The ethics and politics that accompany any evaluation are somehow seen as outside the meaning of objectivity. The result of this restricted notion of objectivity has been the emergence of traditions in evaluation which, when carried to their extremes, produce a reaction of incredibility.

One tradition I have in mind is that evaluators are employees whose job it is to furnish a patron specific information which will permit rational decision-making regarding future program policies. The evaluator seeks to provide information that is most useful to the patron in allocating program resources. There is another tradition developing, however, which rejects this set of assumptions because they are construed as placing evaluators in the service of conservative, bureaucratic, and oppressive interests. The assumption behind this position is that evaluation is a vehicle to offer a radical criticism of the social order. Evaluators thus become advocates of social change for the benefit of the poor and powerless.

Each of these traditions is indefensible to the extent it distorts data and interpretations. Each is indefensible to the extent it ignores certain human conditions. In addition, however, each is indefensible to the extent they contribute to a view that evaluation is another form of special pleading for interest groups. Clearly, evaluators do not serve a more general interest of public welfare in a democratic society if they are the mindless lackeys of existing social and institutional power. It also seems apparent that a doctrinaire adherence to the radical critique in the face of specific institutional needs is likely to leave program managers unreflective about their programs.

The purpose of this paper is to suggest certain ethical and political problems connected with evaluation. These problems arise out of the relationship that exists between patrons, clients, and evaluators. I cannot hope to unravel all of the philosophical and social issues that are implicitly raised in this topic, but I do intend to make a start in the right direction. Generally my position is that some ways of resolving these problems abdicate certain responsibilities by the evaluator. Other resolutions tend to permit the

evaluator to accept more responsibility than he ought to have. In either case the evaluation jeopardizes its objectivity.

Definitions:

Before proceeding let me define several terms. Social action program is used to designate those attempts, usually by government, at social intervention and change as a matter of public policy. Ordinarily such programs are characterized by general goals. Teacher Corps, for example, has the goal of improving education for low-income children. The reference of CMTI is the Corps Member Training Institute held in Richmond, VA. It was a month-long experience for approximately 250 interns and their team leaders sponsored by Teacher Corps. The term patron is used to refer to the role assumed by those who are responsible for commissioning an evaluation. The patron is the party with the money to purchase an evaluation. The client is the party evaluated. Evaluation seeks to make statements about the effectiveness of the client's program. The client and patron may be different parties, or the patron may also be the client in the sense that the evaluator will focus on the treatment provided by the same party who pays the bill for the evaluation. The patron-client role is typically found when a public school system invites an evaluator to examine the effects of a program. Here the patron-client roles merge.

The client role can be separated from that of patron whenever the focus of the evaluation is directed toward programmatic efforts by individuals not responsible for establishing the evaluation contract. A good example of the patron-client separation was the evaluation of the four week CMTI. The evaluation was commissioned by Teacher Corps (Washington) but the focus was on the programs conceived and implemented by Ron Corwin and Roy Edelfedit in Strand 1

and Bruce Joyce in Strand II. In summary, there are three roles an evaluator can confront: The first is with a patron only; the second with a patron-client; and the third with a client only. Each of these relationships generates different considerations of an ethical and political nature.

Statement of the Problem:

To clarify some of the ethical and political problems about which I spoke, there are two general questions which bring into focus concerns about the evaluator's relationship to patrons and clients:

1) To what extent should the evaluator, as opposed to the patron or client, determine the parameters of the evaluation task?

2) What special concerns are raised by the use of participant-observation methodologies in evaluation?

The following matrix indicates that each question can be asked in relation to each of the parties. The implication is that the evaluator may find that ethical and political considerations differ among the parties as specific situations arise.

Issues and Relationships in Evaluation

Evaluator asks:	Patron	Patron-Client	Client
1. Parameter definition	X		
2. Concerns about participant observation			X
3.			
4.			

The first question asks who should define the problem, the evaluator, the patron, or the client? To facilitate the discussion of this issue I will concentrate on the evaluator's relationship with the patron. While I believe it can be shown that it is inappropriate for the patron to wholly determine what is the problem of evaluation, it is not clear the extent to which the evaluator should be given freedom to define the problem. It seems obvious that the patron of a social action program ordinarily has some intended effects or outcomes in mind that need to be evaluated. The patron is likely to inform the evaluator of these intended effects and directly ask that the evaluator look for them.

An initial problem with allowing the patron to define the evaluation problem is that some important effects may not be detected. The patron, in defining the problem, restricts the range of legitimate considerations for the evaluator and, more importantly, limits the conceptual vision of the evaluator. Let me give an example: CMTI was to be evaluated, in part, for its success in developing esprit de corps among the interns receiving the training. The evaluator in this case took the stance that this effect, while having a certain legitimacy, was conceptually inadequate as an evaluation of an intensive month-long teacher education event. Given the dynamic quality of CMTI, a number of effects regarding intern beliefs, attitudes, and skills regarding education would be a more interesting and defensible basis for evaluation. The result was to construct an evaluation around something we have labeled the "development of teacher perspectives." In doing this the evaluator went a considerable distance in defining the evaluation problem.

By placing the evaluator in the role of providing a definition of the evaluation problem, the relationship between patron and evaluator is characterized

by negotiation. What needs to take place is a form of dialogue between the two parties. At this point the evaluator is establishing an ethical and political relationship with the patron. The patron may have political needs; for example, he needs to be funded again next year and the evaluation can help or hurt his position. Certain kinds of information about the program are seen as helpful by the patron. The evaluator should recognize that these needs exist but not serve them slavishly. The evaluator is obligated, on the other hand, to indicate what assumptions he is carrying into the situation. For example, it seems to me that I would be less than honest if I did not reveal to Teacher Corps an assumption which is critical of a basic premise in their teacher education phase. Specifically, I believe it is misguided to train new teachers in the very schools that by definition are already failing to educate low-income children. Whatever the reasons for this arrangement, I believe it will generally prove unproductive as a teacher education program. This assumption is likely to influence my findings to some degree and consequently this might hurt Teacher Corps in its political machinations. To hide this assumption would be dishonest, and to reveal this implicit criticism of Teacher Corps strains the relationship with the patron. In short, the evaluator sometimes asks the patron to buy a little risk along with the service.

But the price may be too high for the patron if there is not some guarantee the evaluator can suspend belief in this assumption during the evaluation. Simply revealing one's biases does not absolve one of a responsibility to control them; more than confession is required to protect the interests of the patron. If there is not some evidence the evaluator can make his own assumptions problematic as well as those of the patron, there is no ethical basis for a relationship. In the course of the dialogue between patron and evaluator, the

latter is obligated to indicate how he plans to prevent his own biases from becoming self-fulfilling prophecies. This dialogue and confessional should attempt to establish obligations for the evaluator in recognition of patron interests. This is necessary to also establish what is in the evaluator's interest; the latitude to define the evaluation problem.

From the evaluator's viewpoint the major task is to establish himself as a professional in the eyes of the patron. This role of evaluator-as-professional carries with it important responsibilities and freedoms. Essentially it establishes the evaluator with a certain independence of judgment regarding the definition of the evaluation problem.

In order to help clarify this claim for professional independence, let me offer some analogies which contrast the role of professional with that of servant. The latter role is taken by a carpenter who has contracted to build a home. He is expected to adhere to the wishes of the person paying the bill. He may think the plans are aesthetically in bad taste, or prefer a different design based on consideration of resale value, or prefer a different construction if his family were to live there, but all this is irrelevant. In short, the person paying the bill has every right and expectation to call the shots because it is that person's judgment that ultimately counts.

In contrast to this notion of servant, there is the role of professional. This role is characterized by an independence of judgment. Consider, for a moment, the medical doctor. If a patient comes to his office and says, "I'm not feeling well, I have something wrong with my heart," the doctor is under no obligation to live with this definition of the problem. If, in fact, his examination and diagnosis uncover diabetes, the doctor has every right and duty to inform the patient of this and recommend treatments which are consistent with

diabetes and not heart disease.

I am suggesting that the evaluator should establish a professional role and in doing so a considerable degree of independence is acquired. To construe the role otherwise is irresponsible because in so doing the critical stance of the evaluator is diminished. It is the independence of the evaluator to define the problem that permits him to take the critical stance, and in doing this avoid being used to reinforce and maintain the status quo of institutional power. In general, institutions are prone to define problems and situations in ways that preserve their power and privilege. Frequently, the purpose of having an evaluation from the patron's viewpoint is to reaffirm and consolidate institutional life. If the patron can define the problem of evaluation in a way that is likely to result in a favorable evaluation, prestige, money, and power will gravitate to the patron and the institution he represents.

Another variation of this theme is for the patron to define the problem of evaluation in a way so that what looks bad is not the fault of the institution. For example, school failure by certain classes of students has frequently been defined as a problem of culture. This means that schools are not failing, but rather the children and their parents are at fault for having undesirable habits and viewpoints. As a result the problem of evaluation has been defined as determining the success of programs in overcoming the bad cultural baggage children bring with them to school. This construction of the problem, if left uncriticized, is very conservative in terms of the demands made on the institution. The evaluator as professional has an obligation to criticize this conception and offer counter definitions as part of the task of evaluation. (Sjoberg, HER, Vol. II)

In assuming the critical stance of the professional, it should be apparent the possibility exists for considerable tension between evaluator and patron. This is especially true when value judgments are made about programmatic goals, as well as how close the program comes to meeting the goals. To challenge program goals is to cut at its very roots. But the evaluator, if there is justification for it, is obligated to do this. In establishing the basis for this kind of evaluation, there must be a strong foundation of ethical and political reciprocity between the parties.

The second general question I wish to address concerns the extent to which the methodology of participant observation creates special ethical and political problems for the evaluator. It is my position there are problems which arise when participant observation is used that are not ordinarily present when more traditional quantitative data is gathered and manipulated in ways which make it impersonal. There is greater anonymity in conventional data. There is no obvious connection between individuals and the reported data. There is an insulating quality to correlation coefficients and analysis of variance. On the other hand, participant observation data appears as much more personal. While names and identities are ordinarily omitted, there is still amore realistic and life-like quality to the data. The narrative quality of typical participant observation studies lends itself to personalizing the evaluation when specific events or situations are presented. In short, the personal quality of participant observation heightens and magnifies ethical and political concerns for the client.

First among these concerns I wish to consider the possibility of damage to persons from evaluation through participant observation. One can easily imagine how the reporting of specific events could be damaging to the professional reputation of clients. Assume, for instance, that an observer notes an angry

confrontation between a Teacher Corps intern and the director of a program. The reporting of that event must be placed in some context. Is it seen by the evaluator as an isolated and uncharacteristic event; or is it seen as part of a pattern? If it can be interpreted as part of a pattern, is it possible to interpret it as part of more than one pattern? Can the angry confrontation be seen as firmness in the face of persistent unreasonable demands as well as insensitivity to the needs of an ethnic minority?

It is precisely this kind of data which can be used to portray the character of events and the individuals within these events. If one is trying to engage in "portrayal" (as Bob Stake has suggested), there is the potential to show individuals as insensitive, unethical, pompous, and even incompetent despite evidence that intended goals of a program were achieved. Whether an ad hominem attack is deserved or undeserved is quite irrelevant to the client receiving it.

As I conceive the task of evaluation through participant observation, there is a license to search for unintended effects. This approach tends to maximize the possibility of accumulating data about a person which can be interpreted negatively. Obviously the moral of this situation is to be careful and sensitive about the reporting of potentially damaging information, but cases will always arise where potentially damaging information about clients is obtained. Recognition of this reality by both evaluator and client inevitably creates a certain level of tension in their relationship.

A second concern that arises through the use of participant observation is the effect this methodology has on the events being evaluated. From a strictly theoretical viewpoint, the introduction of individuals as data collectors into the event being studied alters that event. The practical question, it seems to me, is how important is this alteration? Let me be specific by offering an

example. If the role of the participant observer is, in fact, to observe while being a participant in a training program offered to Teacher Corps interns, this role requires the participant to engage in honest dialogue with others, express viewpoints and preferences, and respond to individuals and events. At what point does the evaluation begin to shape the course of events in a way that would not otherwise occur.

There is, I believe, a very real probability that a conflict will arise within the role of participant observer as both actor and evaluator in events. Even if the individual keeps a "low profile" during the course of formal events, the role conflict may quickly appear during informal events. To use CMTI as an example, the events during the month-long stay in Richmond could be roughly divided into formal training and informal institute life. There is every reason to believe that participant observers could not do their job of gathering evaluation data without genuine immersion in the informal life of the participants. The kinds of probing questions an observer might offer during lunch, between classes, or at night during a bull session serve not only to facilitate the gathering of information but also to bring into focus the agenda of the observer. If the observer continually asks, "Are you really getting something valuable out of this instruction?" or "Are your ethnic needs really being met?" This begins to constitute leading the witness.

It is entirely possible the participant observer could begin to coach the regular participants through the kinds of questions and revelations the participant observer can offer from his particular vantage point. This problem is very real where the nature of the events are either emotional or controversial. The participant-observer may get caught up in the feelings and experiences of the event, and because he/she is by role design an evaluator, the evaluations begin to show through in the daily affairs of events. This condition not only makes

for bad research but obviously this infusion of influence from the evaluator is unethical. If it is perceived by the client this condition is sure to create a difficult relationship between the parties.

Whenever the client being evaluated is not also the patron, there is some ground to anticipate that the client will see the evaluation as an unhappy intervention. From the client's viewpoint the patron has negotiated an agreement with an evaluator to make value judgments about the client. It may well be that this negotiated agreement did not include the client. The power possessed by the patron is not held by the client. All this may lead the client to view the evaluation somewhere on a continuum from a minor inconvenience, to an unpleasant necessity, to an unwarranted intrusion. Clearly the client may see the evaluator as a threat. The use of participant-observation techniques as part of the evaluation can be a major contribution to a tense or hostile relationship between client and evaluator.

The mistrust of the evaluator may encourage the client to develop strategies to discredit the evaluator, or at least insulate himself from potentially undesirable judgments by the evaluator. In various ways the patron can be told that the evaluator is not getting accurate information, or the evaluator is missing misconstruing important effects. What occurs in this strategy is to discredit the evaluation methodology and to provide an informal evaluation in its place.

This kind of political strategy can begin before the data gathering starts, as well as during and after the evaluation. One client tactic is to construct a schedule which makes it very difficult for participant-observers to gather information. For example, no time is permitted for administering questionnaires or interviewing individuals. Administrators can refuse to give out certain

kinds of information, or at least make it difficult to obtain. Key personnel can refuse to be interviewed or be superficial in their remarks.

It should be apparent that the assumptions behind the style of evaluation we are advocating has the potential for creating difficult relations between client and evaluator. The assumptions of evaluator-as-professional with a critical stance, the license to search for unintended effects, and the willingness to use participant observation to capture the quality and character of a program all contribute to a potentially difficult relationship between evaluator and client.

Conclusion:

This paper started with a concern for objectivity as a fundamental standard in educational evaluation. The concept of objectivity, it was suggested, goes beyond the usual technical and methodological criteria, to include ethical and political considerations. These latter factors address the kind of relationship that exists between the evaluator and his patron and client.

In theory, evaluation is considered a highly rational enterprise designed to facilitate decision-making and policy formation. A major problem with this conception of evaluation is that the ethical and political frequently are not considered part of the rational dimension; they are seen as non-rational or even irrational dimensions of the enterprise. My position has been to suggest how they can be included within the rational. To the extent this is done, the development of more powerful and reflective evaluation techniques will bear the fruit that is intended of them.